

Lectures in Psychiatry

William A. White



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LECTURES
IN
PSYCHIATRY
(The Major Psychoses)

BY
WILLIAM A. WHITE, A.M., M.D.

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PREFACE

The particular matter to which I desire to call attention in this Preface is the order of the Lectures, for I believe that, after considerable experimentation, I have finally hit upon an order of presentation of the material that makes the transition to the field of psychiatry at once more logical and easier whether for the student of medicine, the social worker, or the interested layman.

Following the Introductory Lecture, the Situation Psychoses were presented first because the obvious symptoms in this group, especially in the prison psychoses to which all the cases presented belonged, are so easy to understand when explained. The transition from our everyday way of thinking to that of the prison psychosis is an easy one.

Following the Prison Psychoses I took up General Paresis in particular deference to the medical student, as this is fundamentally an infectious disease and therefore affords a familiar medium of transition from general medicine to psychiatry.

Paresis was followed by Mental Deficiency on the general theory that the symptomatology of the defective is easier to understand than that of the more complex mind and also because in this group, as in the preceding, there are so many obvious structural anomalies to which those who are strange to psychiatric ways of thinking can tie. Epilepsy follows for similar reasons and also because its most outstanding manifestation, the fit, is a disturbance of significance in the realm of neuromuscular function with which the student is already somewhat familiar from his physiology, and also because it is a disease with which almost everyone has had, at one time or another, some personal contact.

Following this infectious-organic group I took up the more functional types, first discussing the manic-depressive group, including Involution Melancholia, because in this group the mental symptoms are more understandable or, as I described them, more psychological. And finally I ended with the Dementia Precox group that presents pictures which are the most difficult of all to grasp.

I desire to express my grateful appreciation to Dr. John E. Lind, a member of the staff of St. Elizabeths Hospital, for his able assistance in selecting the patients and preparing the case abstracts, and to Miss Lulu M. Drennan, whose capable stenographic services have made this book possible, and to Miss Clara Willard, who has succeeded in reproducing the spirit of the book in its Index.

St. Elizabeths Hospital,
Washington, D. C.
June 10, 1928

W. A. W.



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LECTURES IN PSYCHIATRY

LECTURE I

INTRODUCTION

I do not start a course of lectures in psychiatry with any delusion that I can teach you very much about psychiatry in twelve hours. Teaching by lectures in medicine is not as popular as it once was; and I quite appreciate that it would be much to your advantage if you could be split up into sections of five or six and go to the wards and study intensively special cases; but this is not primarily a teaching institution and we have not the Staff and therefore the time to undertake this task and so I shall have to compromise by giving you clinics.

I have certain objectives in view, however. Whereas I can not, I appreciate, teach you very much psychiatry, I can at least show you a considerable number of patients and demonstrate their symptoms and discuss these symptoms with you, so that at the end of the course you will carry away perforce some kind of a picture in your minds of the general appearance and conduct of the patients who constitute the groups of the major psychoses. But there is one other thing that I shall try to do. If I can not teach you very much psychiatry perhaps I can give you a point of view that I should consider even more valuable than getting over to you a lot of detailed facts which might, after all, prove to be but fictions when you came to use them. And finally I would like to give you some idea of the significance of psychiatry not only as a medical specialty in particular but as a body of thought in general. These three things, therefore, the visualization of the main groups of the major psychoses, the getting over to you of a point of view, and the giving to you some idea of the significance of psychiatry as a whole, are my three objectives.

This present lecture will be the only lecture, properly speaking, that I will burden you with. All of our next meetings will be confined to the presentation of clinical material.

In beginning our course in psychiatry we are entering upon the study of what, for you, will be another medical specialty, which will introduce you into a new world which for some time may seem quite strange and different from the one to which you are more accustomed. One of these differences has to do with the terms that are used in this specialty. You will find some terms that are strange and you will find some others that are familiar but are used in new ways. I shall try to help you to an understanding of these terms and also to an appreciation of the fact that in this new world of psychiatry the matters with which we have to deal are after all not so fundamentally different as they appear.

Psychiatry is the department of medicine that deals with mental diseases, and it would therefore seem of the first importance that we should understand what is meant when we speak of the mind. We are accustomed to use this word "mind" glibly and thoughtlessly, and with a feeling that we know perfectly well what we are talking about. Most people never even stop to think what may be its real meaning. They assume they know. But for our purposes it is essential that we should have some understanding of this term at the very start of our course.

In the past the general assumption has prevailed that mind and body were in some way two separate things but related in a manner not at all clearly understood. Somehow in the course of evolution it was assumed that the mind came into existence, just where no one could say. Whether animals below the vertebrate series should be credited with a mind might be open to debate; whether the mind did not appear upon the scene until the mammals arrived might also be queried; and whether a child has a mind at the time of its birth is another question that would naturally arise; and, if not, When has it sufficiently developed to present aspects that could be called definitely mental? These are some of the dilemmas into which we are preceptitated when we think of the mind and the body as being separate and distinct, and they present questions which can not be answered on the basis of such a hypothesis. These questions, however, apparently were not as insistent as was the question of the relationship between mind and body, and many hypotheses were created to explain this relationship. The last and the most important one is called the parallelistic theory, according to which the mind and the body are related to each other much as is a man and his shadow. Any change in one implies of necessity some change in the

other and yet neither one is the cause of the other. You see how this idea of a mind distinct from the body, or engrafted upon it at some time in the course of development, produces questions that are incapable of answer.

We may approach the question of a definition of mind from a little different angle and try to reach our goal by undertaking to discover the nature of those conditions which we regard as mental. Let me illustrate what I mean. If we discuss the functions of some organs of the body such as the heart, the kidneys, the stomach or the adrenal glands, we use language that applies directly to these organs. We speak of what the heart does, what the kidneys do, and so forth. In other words, we are discussing certain portions of the individual, or, as we might put it, certain partial reactions, the reactions of certain parts of the body. So long as we do this we are admittedly in the field of physiology. When, however, we ask the question, What is the man doing? and we answer it by describing his conduct, saying, for instance, that he got up in the morning and dressed and had his breakfast and went to his office, we are using language which is admittedly psychological, and, too, we are not describing functions of parts of the organism, we are not dealing with partial reactions, but we are dealing with the reactions of the organism-as-a-whole, in other words with total reactions. Now, it is just my point that wherever we deal with total reactions we are in the realm of psychology, we are dealing with activities to which the qualifying term "mental" may properly be applied.

This distinction between partial and total reactions, the latter belonging within the domain of mind, commits us immediately to certain further and far reaching implications. We see at once that the distinction between partial and total reactions is one that may be made with reference to any living thing. The amoeba, for example, may be considered from either point of view. We may consider the functions of its nucleus or its contractile vesicle, or any other of its parts, and by so doing we remain in the field of the physiology of the various organs of the amoeba. Or we may view the amoeba as a whole. We may describe its actions as its pseudopodia stream toward a nutritious particle, surround it and engulf it, and in our description of this process we are necessarily using terms that are psychological because we are describing total reactions.

You will begin to see the significance of this description of the psychological in terms of total reactions. If all living matter

can be so described then all living matter can be said to have certain reactions which are psychological in their nature. This is not such a difficult concept to grasp as it might at first appear. We are accustomed to thinking of the process of evolution as having begun with life in its simplest form—let us say with monocellular organisms—and having proceeded through the development of the multicellular organisms until finally it has produced such an organism as man, which for all practical purposes presents an infinite complexity. It is no more difficult to see in the reactions of the amoeba equally simplistic beginnings of mind and to appreciate how these beginnings have evolved in the same way to their ultimate result in the infinite complexities of the human mind. In this way you will see that mind and body are not distinct and separate one from the other. They are but different aspects of life wherever we find it. As I like to say, the psyche is as old as the soma, it has a history equally as long. From this point of view, therefore, we may of course look at the organism from either the mental or the physiological point of view, or from any other one of various points of view, much as we might look at a crystal by viewing only one of its facets at a time. So we may consider the organism-as-a-whole from either of these two points of view or from the point of view of its chemistry, its physics, its structure, and so forth. An important thing to remember is, however, that because we choose to pick out one of these aspects to consider it does not mean that that aspect really represents an isolated set of characteristics. It is only one portion of a large and complex whole to which we for the time being prefer to direct our attention.

Another implication of this way of thinking of mental functioning in terms of total reactions and of thinking of the psyche as having a history of development and evolution as long as that of the body has been already indicated, namely, that we must expect to find the mind to be just as highly complex as the body. This complexity has in the past not been adequately appreciated. The only persons who know all about the mind and who can tell, for example, that a person is free from any disorder of mind by asking two or three simple questions such as, What is your name? How old are you? How are you feeling? are those persons who have given no thought to this subject. They are cock sure of their conclusions because they have no information to contradict them. This attitude toward the mind has its analogies in the history of the attitude toward the body,

and the gradual breaking down of our ignorance about the body as the result of its scientific study. Before the days of dissection practically nothing was known about the internal structure of the body. It was looked at, so to speak, and what was inside was imagined and never seen except from time to time when some wound or other injury exposed it to view. All sorts of grotesque theories naturally resulted from such ignorance. The knowledge of the structure of the body had to wait upon its dissection. The fleeting glimpses of its interior otherwise obtained did not convey much information. It had to be carefully and thoughtfully studied in the favorable setting of the laboratory without the disturbances incident to the emotional situations of wounds and by persons bent upon disclosing its mysteries. It has been quite the same way with the mind. We have either been content in ignorance to ignore the marvelous complexities of its structure or else it has been the habit to assume that we could find out about it by meditation, as the result, so it was supposed, of observing the actions of our own minds. It is only in the present century that the mind has been subjected to dissection, or, to use the appropriate term, to analysis, and it is interesting to note that it has had to confront similar prejudices to those that antagonized the dissection of the body. We apparently do not take kindly to having our secret places invaded by the curious, even though their curiosity may be of the scientific variety.

With this broad biological concept of the significance of mental processes, with the necessary implication that the study of the mind, psychology, must therefore of necessity be one of the biological sciences and not a branch of philosophy or metaphysics as it used to be considered, with these concepts in mind we can see how there must be a group of inquiries into the structure and functions of the mind that are comparable to certain well established sciences that relate to the body. For example, over against the anatomy of the body we may study the structure of the mind. Over against physiology we may study the functions of the mind. Analogous to the study of evolution as it relates to somatic structures we may study the growth and development and evolution of the mind. One portion of this study, which has to deal with the development of the mind from birth to adulthood, is generally spoken of as genetic psychology; and it is comparable on the somatic side—on the somatic in its earlier aspects, at least, for we are beginning to deal with mental phenomena previous to birth—to the study of embryology. The comparative

study of the mind among different races and as between man and animals has its analogue in the study of comparative anatomy; while just as we find in nature imbedded in the geological strata the fossilized remains of preëxisting animal and plant forms, which are studied under the general head of paleontology, so we find in the study of mind the remnants of old ways of functioning which are equally antiquated and archaic and which belong in the realm of paleopsychology.

With this biological conception of mental functioning we may now, for the purpose of proceeding to another aspect of our subject, consider briefly how we may express in the most general way the function of the mind. Perhaps I may introduce this subject by saying that the mind has generally been thought of as having as its most fundamental function the adaptation of the individual to his environment. Let us examine this statement briefly and we shall see how it falls somewhat short of being a complete statement of the case.

If we should represent the human mind, for example, by a circle then the environment would be represented by all that which lies outside of the circle and which obviously contacts with it at each point. Now this environment is an exceedingly complex affair and we have a considerable number of so-called sense organs which are especially developed for making the contact more acute with reference to certain of its aspects. Thus the eye is especially developed for appreciating light, to say nothing of its other possibilities in the way of appreciating distances. The ear is especially developed for appreciating what we call sound waves, or certain vibrations in the air that produce sound. Smell, taste and touch are also especially developed for their particular purposes, and a number of other organs for appreciating temperature, pain, pressure, organic sensations such as hunger, thirst, etc., etc. With all this you are quite familiar, but there is another aspect of the environment which has especial significance.

One of the outstanding characteristics which differentiates man from all other animals is the fact that he is social in his tendencies. He is of course not the only social animal, but he is outstandingly the most social of animals; and this association with his fellows, this relating himself with others, occurs as an expression of the mind, or, in other words, it is a psychological affair or occurs at what I like to call the psychological level of adjustment. Now as

a result of man's associating with his fellows, as a result of this contact of minds, there has grown up something which is quite peculiar to man, something over and above and beyond him as a biological individual. That something is what we call culture. Now by culture we mean that great accumulation of traditions and beliefs and superstitions, customs and practices and institutions generally spoken of as social, such as the church and the law. You see if we consider this enormously complex group of customs and social institutions that we can consider it apart, if we will, from particular men, and when we do so consider it we find that it also can be seen to have a history of gradual growth, development and evolution; and inasmuch as it is something, as it were, beyond man as an individual, Herbert Spencer spoke of this aspect of human relationships as the superorganic, that is, over and above and beyond matters just of bodily structure and function. From the point of view, therefore, of this enormously complicated environment, including this cultural superstructure which in the final stages of its evolution we call civilization, we can see how the definition of the function of mind previously referred to, namely, that it adjusts the individual to his environment, is warranted. That is a fair statement of the purpose of mental functioning at the periphery of the circle. For example, with reference to physical environment, if an individual travels say from the United States north into the polar regions we naturally expect him to provide additional clothing so that he may avoid the suffering which would otherwise come from the greatly reduced temperature. This process of adjusting himself to his physical environment is obviously negotiated by the mind. With regard to the cultural environment we would expect the mind to function similarly. If a man is taken with a severe pain or a great feeling of illness or receives an injury we rather expect him to send for the doctor, or if he is unable to do that someone else does it for him. Here again the adjustment is negotiated by the mind.

There is another series of functions, however, that is not comprised in the statement of the case up to this point. We come into the world with certain definite tendencies and drives toward action of a more or less specific type. I am referring to what is generally called in the literature the instincts, although here we are in controversial territory and what constitutes an instinct, and what are the main instincts, and whether there are instincts at all, are matters of discussion. However, it does seem for practical purposes that we

may consider that we make our entrance into this world with certain quite definite drives with which we have to reckon throughout our lives. These drives, or tendencies, or instincts, as you may wish to call them, can be, for our purposes at least, reduced to two. If we think of them in their most concrete expression and their simplest physiological manifestations we may speak of them as the food hunger instinct and the sex hunger instinct. If we consider them from the point of view of their objectives, their purposes, then the food hunger instinct may be spoken of as the self-preservative instinct and the sex hunger instinct as the race-preservative instinct.

If we will represent these two instincts, or perhaps general groups of instincts, by a small circle at the center of the large one, at the hub so to speak, then we will see that the mind has a function in addition to adjusting to the environment at the periphery. It has to adjust and adapt itself to these fundamental instincts, a problem which is not an environmental problem in the usual sense of that term but a problem within the psyche, or an intrapsychic problem. Here is the region of the neuroses.

These two fundamental instinct drives come over to us apparently as hereditary factors in our original constitution and must represent, therefore, in some way the history of the past experience of life up to that point preserved in the germ plasm by some sort of means that we know very little about. In this sense the instincts in their simpler, concrete physiological manifestations and before they have been tamed by the methods of adjustment that I have only hinted at represent our contact with the past and in that sense they may properly be spoken of as animal instincts; whereas the adjustment at the periphery of the circle represents our contact with the present plus an ever-present tendency toward modification of the environment with its necessary reactions upon the individual looking towards future ends.

With this added view of the nature and field of operations of psychological reactions we again are committed to certain necessary implications. Throughout the history of mankind he has always tended to an exaggerated opinion of his own importance and in the past he has thought of himself definitely as if he were the center of the universe. The world was made particularly for him to inhabit, the sun was made to light and warm him, the moon to light the heavens at night, other animals were made for his food and to serve him, and so forth. This state of mind was not difficult to understand

when the universe was a very small affair confined either to small portions of the earth's surface or to the earth or perhaps even to the solar system, but nowadays it is different. Light travels 186,000 miles per second, and we now speak of the universe in units of light years, and we have been able to observe stars whose distance from the earth can only be expressed in trillions of light years. Man is more or less forced, therefore, to recognize his insignificance in this stupendous scheme. The point I wished to make, however, was that associated with man's exaggeration of his own importance was the feeling of his separateness from the rest of the universe. Without getting into a philosophical discussion I may say that that separateness expressed itself as a feeling of lack of identity with the environment either physical or personal, a lack of any organic relationship with the past, and a feeling of perfect free will or choice to do exactly as he pleased. The concept that I have outlined, however, is quite the opposite on all these points. We see now the organism-as-a-whole, with psychic, somatic and other aspects, as we choose to consider them, but we do not see this organism as a closed system, which was the way man used to consider himself. We see it as an open system, or, to be more explicit, as an open energy system; and if we will translate for the time being all of these urges and drives and tendencies and instincts and problems of adaptation and adjustment into terms of energy we see this organism as an open energy system receiving and transmitting energy from the environment both without and within. By the latter I refer to the heritage of the past which comes over to us as instincts. As soon as we begin to look at the organism from this point of view and realize that the mind has a past history of millions of years, that it relates itself to this past as well as to the present by a constant series of energy exchanges, we begin to see how artificial is this whole matter of the separation of the individual from his environment. Individual and environment are only two aspects of a larger whole, just as mind and matter are only two aspects of the larger whole of the organism. Under these circumstances, therefore, to come back to our original problem of mental disorder, we begin to see that the significance of what we call disorder of mind is important because it relates to problems of adjustment, and that the most important problems of adjustment relate on the one hand to instincts and on the other hand to the cultural environment. So that while we may have diseases of individual organs such as the heart or the kidneys which are for the most part entirely

individual affairs, when we get to disorders of the mind, which are disorders of total reaction, we immediately get into the realm of the relationship between individuals, namely, the social relations, and therefore the psychoses can be understood as disorders of adjustment at what I like to call the individual-social level.

To leave the matter of the meaning of mental disease at this point, let me say just a few words on the significance of this medical specialty, psychiatry. Just as the study of somatic disease has taught us much about the normal functioning of the body, because it has thrown into high relief certain functions that we otherwise might not have known about because they were so involved in such a complex interrelation that they did not stand out, just so has the study of mental disease thrown into high relief certain functions of the mind or rather certain mechanisms of the mind which would otherwise have been invisible. Therefore we have come to learn much more about the nature and meaning of mental mechanisms through the study of their disorder than we ever learned to know about them through the study of the so-called normal individual. Inasmuch as these disorders manifest themselves at the individual-social level, it can be easily seen what their significance is for the whole group of the social sciences. The social sciences are beginning to appreciate this significance and are looking to psychiatry to help them with many of their problems. This, of course, is particularly true in such fields as criminology, where the abnormalities of reaction are more or less manifest, but it is becoming true also in other directions. Especially is it being recognized in the field of education as the result of the study of educational failures, and because of the light which it throws upon mental mechanisms it is felt that the knowledge thus obtained is essential for those who undertake the problem of training the young. I might mention many other directions in which psychiatry is coming to be recognized. For example, the historians are recognizing what the psychiatrist has found out about the mind and are realizing that it is no longer worth while to write history which is simply a chronological series of events, but that the personalities back of these events are the important things to understand. The same sort of thing may be said about anthropology, especially in its study of primitive customs and beliefs, of primitive institutions and the psychology of the savage. I might elaborate this point still further but I have said enough to indicate something of the extent to which psychiatric information is being sought and applied.

LECTURE II

SITUATION PSYCHOSES

We discussed some rather difficult problems last week. I told you what we meant when we used the word "mind," and something about the fundamental elements that make up mental reactions. You will remember that I spoke to you about two fundamental instincts, the self-preservative and the race-preservative, the self-preservative being represented at its fundamental, concrete, physiological level by food hunger and the race-preservative being represented at the same level by sex hunger. I shall probably refer to both of these instincts from time to time and to preserve my kind of terminology and also not to let you drift into too simplistic an idea of mind, which is always the temptation, I shall refer to the self-preservative aspects of the psyche from time to time as the ego systems and the race-preservative as the libido systems, meaning by that that we are not dealing with one isolated, specific drive that is clear cut and dissociated from anything else, but that we are dealing with something which is essentially very complex and which involves all manner of exchanges of energy. Therefore, inasmuch as I have defined the human being to you as an open energy system in process of development and evolution I will refer to ego systems and libido systems. The word libido comes from the same root as libidinous and has reference, of course, to matters sexual.

Now the ego systems and the libido systems do not exist separately any more than mind and body exist separately, or anything else exists separately. They are always found in close and intimate association, but we may with reference to these fundamental instincts do just as we may do elsewhere. We may focus our attention upon either one of them, or, perhaps, what is more to the point in a clinic of this sort, we may find that the disturbances which the patient presents to us are disturbances which are much more obvious in one system than in the other. In other words, the patient may obviously throw up symptoms that belong to one system somewhat more than the other, just as one patient may come in with obviously a cardiac disease and another patient with obviously a stomach disease, or what not, and yet we

should not think of that person solely in terms of heart or stomach. He should be thought of in all his aspects. I do not know how much your professors have talked to you of the mental phases of gastric disorder, heart trouble, etc., but they are there and sometimes are very important. I do not know how much they have talked to you about the social aspects of gastric disorder or heart disease, heart disease particularly, but they are there and are important and are very well recognized. So we have individual physical, psychological and social aspects of everything but we will find as we look over our patients that either the libido system or the ego system is more obviously disturbed one than the other.

Now the cases I shall present to you to-day are the first patients you will see and therefore I want to present situations which will be easily understood by you, as nearly as possible. In each case I will first present the patient and show his symptoms and will then explain the situation.

Case No. 1. The outstanding characteristic that this man presents is an interesting one. He has been a patient in this hospital a number of years and during that time he has developed a language of his own. He reads and writes and sings this language. I have here some of the patient's writing in this language. If it has any likeness at all to a known language it is a likeness to a type of Turkish. It is beautifully written, not just a lot of random strokes on a paper with a pencil but a highly elaborated, beautiful scheme. (In response to request that he do so the patient addressed the class in this language and sang a verse in it.)

In this case I want you to see the discrepancy in what appears to be a hopelessly complex problem and the explanation, which is relatively simple.

This is a very interesting situation. This patient has been with us a good many years and during the first several years he did not speak anything but this language and did not write anything but this language. He understood me just now when I spoke to him in English and he replied to me in English, at least in part. For a long time he could not be induced to speak a word of English, although he knew it, nor would he speak in any other language than this one of his own invention. This language as he speaks it appears to be well constructed, as it does in this written copy. Now what is the story of this man?

In the first place, he is a mixture of American negro and Portuguese, so he has some Latin blood and may know something of some Latin language. If you ask him if he knows any specific language he will tell you he knows it—if asked if he can talk Italian he says “Yes” and then talks this language he has developed; if asked if he can talk Chinese he says “Yes” and then talks this same stuff. It is not a real language at all. It has none of the characteristics of a language except that it has a certain amount of regularity of sound construction. Some years ago the patient got into some trouble in New York State, was arrested and sent to State Prison. While there he became obviously mentally deranged and was sent to the asylum for criminal insane at Dannemora, New York. While he was in prison his wife was going around with another man and the patient heard about it, and, I understand, openly made the statement that he would settle accounts with her when he got out. Under our penal system as at present conducted he was released when his sentence expired, notwithstanding the fact that he had announced his intention of killing his wife. He came to Washington, procured a razor, waited for his wife, met her and proceeded literally to carve her into ribbons. Then he was admitted to jail and was indicted for murder in the first degree. He was tried and convicted of murder in the first degree, for which the sentence is death in this jurisdiction. Then he was sent here for a time for observation. I remember very well seeing him then and examining him and being convinced that he was mentally deranged. For some reason, however, he was sent back to the jail, presumably to be hung. Within two or three hours of the time the execution was to take place the President, having had his attention called to the fact that I had examined the man, called me on the telephone and asked if I thought he was crazy and I said I did, whereupon the sentence was commuted to life imprisonment.

It is a little difficult for us to realize what would happen to us if we came that close to death but the effect on the patient was about like this. You will remember that I told you last week that we would find as we went along in our psychiatry that the different mechanisms of the mind had pretty fairly close analogies, at any rate to the mechanisms we are accustomed to in the body. Now we are accustomed to certain mechanisms in the body that we call defense mechanisms, for example, perhaps the best known one, leucocytosis. When the body is invaded by an infectious organism the leucocytosis, as you know, represents the effort on the part of the body to fight

the invading organism, and the degree of leucocytosis runs more or less hand in hand with the ability of the body to meet the invader. In the case of persons with a very severe infection if there is no leucocytosis at all it is not a very good indication. So we are accustomed to speak of defense mechanisms in the body. Then we have defense mechanisms of the mind. Within two or three hours of being hung the patient found that his sentence had been commuted, and he was sent back here. He had been here before and his visit had not been altogether satisfactory because he had been taken from here and sent back to jail, presumably to be hung. So when he came back here after his sentence had been commuted the patient was perplexed, did not know who could be counted on to be friendly and who could not. He was in a state of mind where he did not dare have anything to do with us at all. One of the simplest mechanisms that the so-called malingerer employs is to shut up. It is the one thing that the lawyer is very apt to tell his client, especially if his client is guilty—to keep his mouth shut, on the general policy that if you do not talk you will not give yourself away. So this patient shut up and refused to talk; but it is a pretty difficult thing for a human being to live in a community of human beings and keep his mouth shut altogether, so he did the next best thing and developed this artificial language, which gave him a certain amount of satisfaction and expression. Instead of remaining mute as many patients do he did a much cleverer thing—he developed this artificial language, which enabled him to retain his individuality and at the same time remain utterly isolated from everybody. For years he never spoke a word to one of us that we could understand but he understood everything we said, so you see he had a very distinct advantage in the situation. As years have gone by he has gradually softened as it were, has loosened up. He has become increasingly convinced that this matter of hanging is a closed issue, although I suppose he is not absolutely sure of it even yet and I do not know of any way in which he could be made sure of it. He may still feel that if he should happen to get well he might be taken away and hung. So he still sticks to his language although he uses English more or less.

Here we have, therefore, a mechanism that is on all fours with a leucocytosis or formation of antibodies, a defense mechanism, in the first place. On the other hand, this is an illustration of a psychosis from which the patient can not afford to get well altogether because

he does not know what might happen to him if he did and he therefore has to retain the psychosis. That may sound as if I am talking in the language of malingering, but I am not. This is not a thought-out thing on his part in the way I am presenting it to you. It is an instinctive thing on his part, an emotional thing, a feeling thing. He is protecting himself just as an animal protects itself, or a spider, for example. If you jar a table on which a certain type of spider is walking it will roll up into a little ball, "play 'possum" as the saying is, appear to be dead. So this patient will appear, at least, to have a psychosis. Now of course it is more profound, even, than that. As a matter of fact the patient has developed a lot of other psychotic symptoms that indicate that he has deteriorated through the years—he collects all sorts of rags, decorates himself in various ways, is more or less filthy in habits, etc. But running through the whole thread of his psychosis is this defense reaction, so we may call this a defense psychosis. You will note that fundamentally here we are dealing with a distortion of the ego rather than the libido system. Although I am quite sure I could demonstrate that both were involved, self-protection is the thing that dominates the picture.

Case No. 2. In response to questions the patient stated that he was the King of England, the "whole shooting match," and the Attorney-General, that he had thousands of children, that he was the founder of schools and that he owned the hospital.

This patient is, like his predecessor, a life prisoner. He came here while under life sentence for murder. You have heard some of the things he says. He owns the institution, has thousands of children, is the King of England and the whole shooting match—is omnipotent, has all power of all kinds and descriptions, as well as he can express it. Of course a philosopher could probably express it much more poetically and interestingly, but he is an ignorant colored man and we can not expect his expressions of power to be very interesting from a literary point of view. Incidentally, he has been a bad man. Now as a matter of fact we do not use restraint here in the hospital and we let him come in with handcuffs on just to give you a picture. For a long time he has not worn wristlets. They were just put on to bring him here and let you see how he looks. They were put on for that particular reason and not because we were afraid of him. He is not dangerous. Just listening to him talk in this subdued, whispering voice, he does not impress you as a man to be afraid

of. He has had an occasional row here as other patients have but he has not been a dangerous patient here at all. But the point is that a part of his feeling of omnipotence and power is that he feels himself to be a man who is terribly dangerous. He feels very powerful and strong and dangerous, and therefore he used to beg us to put handcuffs on him and we did it, not because we were afraid of him, as we do not think he is dangerous in this setting, but because he felt that he was dangerous and with dramatic instinct he wanted it to be more or less obvious that he was dangerous. So he liked to parade with handcuffs on, as if he were the only person in the institution that had to be so restrained, as if he were the only person of whom we were afraid. That sets him apart from everyone else, puts him on a pedestal, makes him feel that he is as a matter of fact this very powerful individual he in his delusions thinks he is.

Here we have a much more subtle defense psychosis. The old comic opera presentation of a prison was a place where the warden had to exercise the greatest kind of guardianship to prevent people from breaking in, it was such an excellently conducted place. The only thing he had to do to discipline a prisoner was to threaten him with discharge. That is the comic opera prison. Now this man is making somewhat of a comic opera out of his imprisonment. It is a pretty fatal sort of thing, life imprisonment. It is not a pleasant thing to face and different people face it in different ways. Now to a certain extent in his thinking and feeling he has eliminated this intolerable thing, life imprisonment. He is more powerful than anybody here, is omnipotent. Obviously he does not have to stay in a place he owns. He is the Attorney General and the King of England. Obviously we could not keep the Attorney General or the King of England locked up here very long. He has developed a set of delusions that are absolutely opposed one hundred per cent to the fact of life which he has to face, namely, life imprisonment. It could not be so if the things he believes in his delusions were so. Therefore over and against the inevitable certainties of life, which are unacceptable to him absolutely, he rears a delusional system the object of which is to combat those certainties, and the extremes to which that delusional system go are the measure of the extent of his necessity. For instance, if he were only put in prison for six months and erected a delusional system it would not have to go to any such extreme. But the fact is that imprisonment is for life, an irretrievable thing, and he has to build up on the delusional side by a process of pyramiding

an ever increasing system of power delusions which are calculated to counteract this feeling that he has as a result of his life imprisonment. Here we get a principle that is of very considerable interest.

I told you last week that the function of the psyche—I prefer to use that term rather than mind because it is of broader significance—was two-fold, to relate the individual to his environment at the circumference of the circle and also to relate the individual to the instinctive drives that come over to him from the past by means of heredity and presumably in the germ plasm. Now we can in addition express the function of the psyche as being an organ for the purpose of equalizing stresses, releasing tensions and bringing about equilibrium. Wherever you find a disturbance of equilibrium in the psyche you immediately find a mechanism set at work for restoring that equilibrium. Now the equilibrium in this man's mind has been destroyed by his sentence of life imprisonment. He can no longer be happy because a thing has happened to him that is thoroughly unacceptable, one of those damnable, inevitable things that we can not escape but can not accept. He can make no adequate adjustment to it at the reality level. He attempts to make an adjustment but for him it has to be a psychotic adjustment, and therefore he attempts to build up a delusional system which is of equal force and power and strength on the other side of the equation to the amount of discomfort which the sentence has imposed, and inasmuch as that can not be done the tendency is for this delusional system to climb to ever-increasing heights. So the psyche is here striving vainly to produce a state of mental equilibrium, of poise and harmony, a feeling of rest and security, but it can not do it and the psychosis is an expression of disequilibrium of that sort.

So you see here is a defense psychosis with a picture as different from the previous picture as any two pictures could possibly be on their surface. At bottom they have the same significance.

I want you to realize that this has nothing to do with the phenomena of consciousness as we ordinarily call it. It is much easier for us to understand a mechanism of this sort when we think of it, as I am constantly doing, in terms of energy. Here we have a problem in energy distribution. We have a piling up of energy on one side and another piling up on the other side to counteract it. But it can not be done and so this fellow comes to no solution.

The next patient is a dangerous and a tremendously powerful man so I will not bring him before you.

Case No. 3. This is a fifty-four-year-old colored man who has been in the hospital for twelve years and is serving a life sentence for murder. Before he got into his present trouble the patient was a hard-working laborer, being engaged in the business of moving furniture, especially pianos. He became extremely jealous of his wife and accused her of being intimate with another man. Finally his conduct was so threatening that she left him. He then became infatuated with a married woman. She was in the habit of going out with other men and he repeatedly warned her not to do so. Finally he lay in wait for her and shot and killed her. When the police came to arrest him he barricaded himself and shot at the police, wounding one of them. At the jail he was morose and at times attempted to beat out his brains against the cell wall. He pleaded guilty to second degree murder and was sentenced to life imprisonment. A few months after reaching prison he was transferred to Saint Elizabeths Hospital. During his stay here he has steadily maintained that he was never convicted of any crime, saying there was another man by the same name who committed the crime and with whom he was being confused. He maintains that he was never tried and was never in prison and is being held illegally. He becomes quite emotional when discussing the subject. At times he is so angry at the officials of the hospital on account of his supposed illegal detention that he would assault them if not restrained.

As stated, while at the jail before coming to the hospital the patient attempted to beat out his brains against the cell wall. That is not an unusual type of reaction. Think of it in these terms: here is a man of unusual muscular power, a tremendous fighting person, just an ignorant colored fellow with few intellectual resources at all, who was caged in a six by eight cell. Just imagine it some time and you will understand why he tried to beat his brains against the wall. In the moving picture "Chang" they get a tiger by the tail and he does precisely the same thing. We call that psychiatrically a panic reaction—the person is in a panic.

In the patient's statement that there was another man by the same name who committed the crime and with whom he was being confused, we see the defense reaction again. We see how the individual who is in a perfectly intolerable situation attempts to think himself out of it. He can not get out of it physically so the next best thing is to try to think himself out of it.

When I go through the ward and talk to this patient, as I do from time to time, he starts in by talking in a reasonably calm manner. He usually hands me a letter. He keeps on talking and gets more and

more excited, a crescendo performance, until if I stayed and listened he would be like a roaring bull. Here is a letter addressed to me. He says :

"With regards to the claim of legal warrant of commitment in this case. Allow me to say to the gentleman that I desire to take distinct issue with him on that point.

"The law as I understand it provides and confines you strictly to the care of those who have been lawfully acted upon—and placed in the care and custody of the asylum upon a warrant of transfer commitment which presupposes an original jurisdiction. This is the purport of opinion. I presume the gentleman accepts it as the law."

He writes letters like that all the time in which he simply reiterates over and over that he has never been committed, that there has never been any legal warrant for his detention here and that therefore he is illegally detained, that he has never committed a crime, etc. He tries to think himself out of it. Of course he does not succeed. He says they could not put him here and we have no right to detain him but the fact is staring him in the face all the time that he has been sentenced and that he is here.

Now just a few words as to the mechanism in this case. In the first place, occasionally the patient will let slip a comment as to what occurred when he was in Atlanta, the federal penitentiary. If he is caught up and asked if he was ever in Atlanta he immediately denies it and says he was never there. Yet he will slip up occasionally and let it out. He will do the same about being in the District jail. He denies in his communications and under the influence of his delusions that he was ever in those places because to him acknowledging that he had been in Atlanta prison or in the jail for murder would be tantamount to acknowledging the whole thing that is the matter of contention with him. So he denies it all but occasionally he refers to things that happened in those places. Now it is not so many years since that that would have been taken as an evidence of malingering and I think a great many people would now think it was an evidence of malingering, but it is not.

There are two mechanisms I want to call to your attention—this trying to think oneself out of something that confronts one as inevitable, and this double attitude toward the world—denying it on the one hand and then admitting it on the other.

With regard to the ideas of omnipotence in the preceding case and

the thinking of the thing out of existence in the case now under discussion, the theory roughly runs something like this. There was a period once upon a time in all our individual lives when we were, literally speaking, omnipotent. That was when we were being carried in the mother's uterus. What is meant by that? This is of course hypothetical but it is explanatory and therefore helpful in getting an idea of how these things come to pass. The child in its mother's uterus may be conceived to be omnipotent in this way. It is easier to define lack of omnipotence than it is to define omnipotence. If we should define what we mean by lack of omnipotence we could say a person who was not omnipotent was a person who wanted something and could not get it, who wished for something and could not bring the wish to pass. It is a negative definition. Now the child *in utero* as well as we can conceive it, which of course has not very much to be said for it, has no wishes in the sense in which we ordinarily use that term. It does not even have to breathe. Its mother breathes for it. It does not have to eat. Its mother eats for it. Everything necessary to carry on life is done by the mother. Then it resides in a standardized environment which is not subject to many fluctuations. It has an environment which remains practically unchanged. Particularly, it is a fluid environment in which the embryo or foetus floats and therefore does not come into contact with anything harsh. It is a salty fluid of about the specific gravity of urine. The foetus floats in this warm fluid of constant temperature undisturbed by the outside world. Lights and sounds may filter through in attenuated form but for the most part they do not. Now a person who is not omnipotent can not fulfill the wishes he has, then by that same token a person is omnipotent who has no wishes and therefore can not be disappointed. So the foetus to all intents and purposes is in this negative sense omnipotent. We are constantly attempting to explain symptoms in patients by reference to actual personal experience. Therefore we are inclined to think as we go back in the history of a patient from adulthood, back on the road that leads to omnipotence, that the further we go the nearer we approach omnipotence, that therefore every individual has had in life an experience of actual or relative omnipotence. Now when individuals are stressed, as these patients are, with absolutely inescapable reality situations to which they can make no adjustment, they search, as it were, through the annals of their past experience to find some way which they may have at one time used which would meet such a situation.

They do not find that way until they get back to this period of omnipotence. So they haul out into the foreground a type of mental experience which belongs to the remote past and undertake to make that function.

This patient has another mechanism. He lets slip occasionally a remark that shows perfectly well that he knows he has been in Atlanta, but he tries not to know about it. Therefore we have a double type of expression—on the one hand a denial and on the other hand an affirmation. A few days ago I was reading the case record of a woman who killed someone she hated. While she is confessing the homicide and expressing her terrible regret at having done this awful thing she meanwhile smiles. We call that an ambivalent reaction. There are people who are right handed and people who are left handed. There are people who can use their hands equally, who are called ambidextrous. We call psychological things that are equally expressed on both sides of an equation ambivalent. In the case of this woman we have a disturbance largely in the ego system. She had offended her own ideal and felt tremendous regret so that the regret is evidence of the ego ideal, on the one hand, but smiled—an expression of affect, emotional attitude to the one killed, on the other hand. So here is a man who knows he has been in prison and through the whole experience and is fighting all his life with all the force and strength he has to believe it is not so. He knows it. It is all there but perhaps just a little beneath the surface. He knows it all the time but he will not acknowledge it or say it, and it is only when he is a little off guard that the fact that he knows it slips out in some phrase.

LECTURE III

SITUATION PSYCHOSES (*Continued*)

Last week we talked about situation psychoses, about a certain group of the situation psychoses—the so-called “prison psychoses,” and we defined that particular group of prison psychoses as defense psychoses.

Now you will remember that in my original talk I told you that we might consider any aspect of the organism that we wanted to, for the purpose of examining into it and seeing what was going on, but I warned you that so long as we were considering only a single aspect of the organism we were creating an artificial condition. The organism is a whole and while any portion of it may be considered that consideration must not imply that that portion of it can be taken away from the organism and has no relation to the other portions. In the same way I intimated to you that the organism and its environment were not two separate things either one of which could be considered absolutely without relation to the other, that both had to be considered in order to encompass the entire problem. So that I am constantly doing the very thing which I warned you against, but I am doing it out of necessity for the practical reason that I want to bring to your attention certain aspects of the cases that I present to you, either because those aspects are brought out more poignantly or come to the surface more emphatically, or because those aspects are more illuminating in certain ways, or because those aspects have some other practical significance. Therefore when we talk of situation psychoses we are speaking of the psychoses where the situation in which the patient finds himself has especially important implications either for the interpretation of the psychosis or in the matter of its etiology. The term situation psychosis could be applied to all psychoses. We merely use it for that particular group, the prison psychoses, because there the situation is of predominant importance. You can understand, if you will use your imagination a little, how being sentenced to prison for life may place the individual in a situation which is of such importance that failure to consider it

would result in our missing the essential points as to an understanding of the psychosis.

There is a whole new movement in psychology to-day, and the psychologists call that type of psychology the Gestalt psychology. This whole movement in psychology has reference to this very matter of situation, and the point that the Gestalt psychologists make is that we cannot remove the organism, or, if we are talking in more definitely psychological terms, the idea or the sensation or what not, from what we call the setting in which it occurs if we are going to understand it. The word Gestalt, of which the plural is Gestalten, is German and has no adequate English translation. Many words have been suggested as being English equivalents, and the one that has received most favorable consideration is the word "configuration." To emphasize this point I might tell you what a Gestalt situation is, tell it in terms I have already used in my first lecture describing the meaning of mind and some of the phenomena of the living organism. If we have a Gothic cathedral, for example, we can, if we wish, consider several aspects of that cathedral. One of the aspects of that cathedral which we may consider is its structural components, just as we may consider the structural components of living organisms. We might consider the structural components of the Gothic cathedral as blocks of granite that have been placed according to plans outlined by the architect. Now we may consider the Gothic cathedral in terms of its blocks of granite forever, but so long as we continue to confine our attention to the blocks of granite of which the cathedral is made the meaning of the cathedral as a cathedral will forever escape us. Just so long as we consider the body solely in terms of its component cells we will never understand the body. And so the Gestalt psychologists would say that the harmony of the structure of the cathedral, its spiritual significance and its social significance in the community, the function it has to serve in that community—all those things have to be taken into consideration and are part of the Gestalt, part of the configuration, and that by taking any one of these components alone we miss the meaning of the totality of those components.

So from that point of view you will see that any psychosis is a situation psychosis. You will see that any disease in order to be understood must have all of its various components understood. We cannot understand heart disease, or cancer, or tuberculosis, or gastric ulcer, or mental disease, or social delinquency, if we leave out any

one of the factors, either the cell structure, the anatomical structure, the physiological function or the social significance. All those things need to be encompassed in a complete understanding.

I will supplement our talk on prison psychoses by showing you one more patient, whose record, briefly, runs something like this:

Case No. 4. In 1907 at a negro picnic the patient, a negro, became involved in a quarrel with another negro over a woman, and a bystander essayed the rôle of peacemaker. The patient had an open knife in his hand, with which he was cutting meat, and in the scuffle he stabbed the peacemaker, who afterward died. The patient was tried, convicted and sentenced to life imprisonment. He arrived at the penitentiary in 1907.

The exact time of the onset of his psychosis can not be learned. The prison record merely shows that he was admitted to the psychopathic ward there Oct. 20, 1912 and that for some time previous to that he had been under observation on account of erratic behavior: he called the attention of the prison physician to a tattoo mark on his hand, and stated that he believed he was not a negro but was painted black. He also expressed ideas to the effect that he had built a number of prisons and railroads; that the warden owed him \$40,000; that he was a detective, an author, etc.

Patient arrived at this Hospital Dec. 6, 1912. The whole psychosis seemed to consist of a confused mass of delusional ideas, the most constant of which were those about his color. He stated that he had assumed his present disguise a number of times in the past in order that he might freely mingle with the negroes to carry out certain business and political projects. He had also adopted, so to speak, a negro family of the same name as his own, and when he was wearing this disguise he lived with them the more completely to fool people.

Other delusional ideas which do not seem to play as prominent a part are that his victim did not really die, but only simulated death; that he built a town called Washington in Louisiana, exactly resembling the Capital City, and that there he was a leading citizen; that he built numerous prisons and railroads, that he "immigrates," as he expresses it, people to parts of the South, West, etc.

Briefly, then, the patient has compensated himself for reality in three main ways:

First, he is not a murderer, because his victim is still alive.

Second, he is not imprisoned for murder because he himself built and owns the prison.

Third, he is not the negro imprisoned for murder, because he is a white man disguised as a negro.

There is perhaps a fourth method of compensation which seems to be

a comparatively late development, and is not yet fully elaborated. As nearly as can be understood, the whole thing is a case of mistaken identity, due to the fact that there is a town in Louisiana called Washington (this is really the case but the same is true of most States and the town of Washington, Louisiana, is evidently very small) which the patient built and where he is a prominent citizen, etc. Through some mischance he has been confused with another man of the same name, a poor Washington negro, who has committed a murder. If his townspeople in Washington, Louisiana, can be notified, the error will be rectified. Lately he has increased the number of Washingtons to 18.

In reply to questions the patient stated that he was just about in the southern portion of Missouri; that he had washed this color on his skin and looked at it but it did not come off; that he thought he was once a man of influence but that he was "conjured" during the time of the war, that if he was conjured dealing with Washington would be from the borders of Mississippi where George Washington's people came from, etc., etc.

I wanted to show this patient because we have here a delusional system that is somewhat more subtle in some of its manifestations and has considerably wider ramifications than the delusional systems of the patients shown last week. This patient as a result of his efforts and because of his limitations has developed a system which after all is not a very clear-cut affair and gives one the impression of being rather a confused jumble out of which we have tried to pick the main functional trends. The idea that he is not a murderer because his victim is still alive is not an uncommon delusion in murderers who develop prison psychoses. He thinks reality out of existence. He killed a man and develops a delusion that the man just faked death. You see that in his delusions every aspect of reality that is unfavorable is negated. We are dealing here with a negro laborer, a person of very limited mentality to begin with, and we cannot expect any very elaborate delusional ideas. They are relatively simple but they are effective as far as such ideas are capable of being.

From the patients I have shown you will get an impression of the murderers as we see them among the patients here. They seem to be a calm, friendly sort of people. This fellow is perfectly well behaved, is industrious in the prison building, does a lot of things that amuse him. He made a violin for himself in odd hours. He never gets angry or strikes anybody or causes any difficulty at all.

In contrast with the general idea of the public as to what constitutes a murderer, this is the type of people we get here. You might take away that picture of a murderer and think about it.

Before closing this subject of the prison type of situation psychosis I will simply add that imprisonment is a form of stress, that the individual is the material upon which the stress acts, and that the break is the result as between the strength of the stress and the resisting power of the individual. When the stress is great enough and the resisting power of the individual is weak enough, then the individual breaks and develops a prison psychosis. The way he breaks does not necessarily depend upon the stress. It depends upon the type of individual he is. Just as a piece of metal that is subjected to stress is more apt to break in one certain direction than in another, so is an individual. If the piece of metal has a weak place that we call a flaw that is where it will break and so it is with an individual. So we find that in the prison psychoses we have a great many varieties of mental picture. The content of the psychosis—what the individual is thinking about and what he talks about—is dictated by his environment. For example, this man we have just seen says he did not kill the individual in question because that individual is still alive, also that he is not a prisoner because he owns the prison. Another prisoner will tell you he has just had a pardon from the President and is waiting for it and expecting it every day. He will say he has been very nicely treated in the hospital and thanks everybody and is getting ready to go as soon as the pardon comes in the mail. The content of the psychosis is dictated largely as a result of the environment in which he finds himself. The mechanism of the psychosis, however, is dictated by the type of individual the person was before he was subjected to the stress. It is dependent on the weak spots in his character make-up. And so we have situation psychoses—prison psychoses—that show essentially paranoid types of reaction, we have prison psychoses that show essentially manic types of reaction, or essentially depressive types of reaction, or essentially dementia precox types of reaction, because these people that are subjected to the stress of imprisonment are paranoid types of personality, or manic-depressive types of personality, or dementia precox types of personality, &c., and when they break they break in that kind of way. The mechanism is dependent on the type of the individual; the content of the psychosis is indicated by the environment.

So much for the situation psychoses.

GENERAL PARESIS

You will remember that I told you I started with the situation psychoses because I wanted to show you a group of patients that had types of mental symptoms that would be understandable by you. In psychiatry you are getting into a field of thought that is alien to most of you, and I wanted to make it easier for you to enter this field of thought by bringing to you certain psychological pictures I was sure you could understand. When a fellow who has killed a man says the man is not dead, you can understand how that compensates for the reality situation he is forced to face.

Now the next group of diseases I will introduce are introduced for a similar but somewhat different reason. You have been listening to lectures about all sorts of somatic diseases, and we will now take up a group of psychoses associated with a very definite somatic disease, because again you will find yourselves on more or less familiar ground. We will begin with the psychoses comprised under the caption general paresis, general paresis being essentially and pre-eminently an infectious disease, not fundamentally and primarily from the point of view of classification a mental disease but fundamentally an infectious disease, a variety of the manifestation of syphilis. Syphilis is an infection with a specific microörganism. The general paretic drifts into the ašylum not because he is a mental case but because in the course of the development of syphilis he develops a particular group of disabilities as a result of the involvement of the central nervous system which produce mental symptoms, and for practical purposes the mental symptoms become the most important ones. In the matter of handling him the mental symptoms are practically the most important, though from a strictly scientific point of view of classification we will call general paresis an infectious disease.

Just a few general remarks about paresis. The present status of general paresis is a very recent one. When I started in the field of psychiatry it was not known that general paresis had a syphilitic etiology. It was suspected but it was not known because the spirochete had not been discovered and isolated. The whole modern conception of paresis has followed the discovery of the relation of the spirochete to syphilis. One of the reasons, and probably the most important reason aside from the isolation of the micro-organism, why general paresis was not recognized or was not fully

determined to have a syphilitic etiology was the fact that general paresis does not develop for a considerable number of years after the initial infection. The initial infection occurs in a young man, we will say, in his twenties, and he develops general paresis in his forties. Anywhere from six or seven or eight years is the general minimum, and fifteen or twenty years is the ordinary maximum for the interim. So it was rather difficult to see how a disease was dependent on syphilis when the syphilis was acquired fifteen or twenty years previous to the disease and in the interval the patient had been to all intents and purposes perfectly well; but as soon as the spirochete was discovered all of that doubt was cleared up, because the Wassermann test, which was developed for the diagnosis of syphilis, was found to be positive in practically 100 per cent of general paretics, and then finally the spirochete itself was found in the brain cortex of the parietic patients. It was found in the cortex by an American scientist with the assistance of a Japanese. The American scientist was Dr. Moore, now Associate on the staff of the Matteawan State Hospital for Criminal Insane in New York State. The Japanese was a man whose name is familiar to you, Dr. Noguchi,* of the Rockefeller Foundation. Dr. Moore found these spirochetes in the cortex. Neither he nor anyone else had seen them before and he was not sure what they meant. He sent them to Dr. Noguchi, who felt convinced they were the spirochetes. So the spirochetes were identified for the first time in the cortex of the parietic.

We might theorize to some extent, and perhaps it is worth while to do so a few minutes—as to what happens to the parietic. Why is there an interval between the infection and the development of general paresis and is general paresis a different disease in any material way from syphilis as we ordinarily know it? There have been a number of reasons set forth for thinking one thing and another about this problem. The main ones are these. In the first place the theory has been rife now for a number of years—it has not received absolute proof and is still a hypothesis—that there are several strains of the spirochete and that some of these strains are especially virulent for certain parts of the body. In other words, we have one strain that particularly affects the skin and mucous surfaces, another that affects more particularly the nervous system, etc. The reasons for that belief are in the main two-fold. If you will go through this institution, where we have constantly in the neighborhood of 400

* Deceased since this was written.

neurosyphilitics, mostly all paretics, and will strip them naked and look over them rather carefully one of the striking things you will notice will be the absence of cutaneous scars. You are familiar in your clinics with the big brown patches over the tibias, where patients have had syphilitic ulcers, the big scars of the mucous surfaces where there were mucous patches. Now in our general paretics you will not find such things. Most of our paretics have a perfectly clean skin. It was out of such evidence as this that the theory was developed that there was a neurotropic strain of spirochete that especially involved the nervous system, and there were certain other evidences pointing in the same direction. Almost every syphilologist has observed two or three or more patients all developing neurosyphilis and all having acquired their initial infection from the same source, and it would appear in cases of that sort as if there were a particularly virulent strain or a special neurotropic strain of which the person from whom the syphilis was acquired was the host. That theory remains an attractive one but so far largely unproven. Then of course there is the other theory, equally more or less unproved but that seems more or less obvious, that in certain people certain tissues are more or less susceptible to syphilis. Then there is another theory, developed by the great British anatomist of the brain, Dr. Bolton, who claimed by an examination of paretic brains that the histological make-up of the cortex of the brain was such that if the patient had not developed paresis he would have developed some other mental disease—that is, that the cortex of the brain is somewhat inferior. Twenty or thirty years ago we heard much about inferior organs. The theory was developed then that all organs of a given individual are not of equal efficiency, that some are fundamentally and inherently inferior, that those inferior organs do not respond as successfully as the other organs to stresses on the individual, that when a break comes because of excessive stress the break comes along the line of the inferior organ. Therefore, with an inferior cortex, the individual heavily stressed on the mental side and having an infection of syphilis the break occurs at the cortical level and he develops general paresis. You can take these theories for what you wish.

There is another aspect of paresis that is very interesting, the sex distribution, which is quite significant. For every one woman who has paresis there are approximately, according to the statistics, about three men who have it. Historically that is rather interesting

because in my early days as a psychiatrist there used to be a considerable amount of doubt whether women ever developed paresis at all, and the reason for that doubt, you can see, was in part that the disease was preponderantly a masculine disease. But there was another reason for that doubt and it was this—that in those days, and I am speaking now of upwards of thirty years ago, we did not diagnose a patient with paresis by laboratory methods because we had no laboratory methods. The only diagnostic criterion was mental symptoms, and we believed we could not be sure a person had paresis unless there were grandiose delusions of a particular type. Essentially what we meant was ideas of grandeur that went beyond all limits of probability, so that people talking in terms of money would not say they were worth a million, but would say they were worth billions and trillions and quintillions and sextillions—until they get to the point where they had to invent new names to describe the amount of money they were worth. And similarly with other things. That type of grandiose delusion was said to be pathognomonic of paresis, a term we used to use. Now it seems that when women do get paresis they do not have that grandiose type of delusion. In recent years since we have had the laboratory means of diagnosis it has been found that this grandiose delusion is present in only comparatively few paretics, so that many paretics before were diagnosed as secondary dementia or something of that sort and were not recognized as paretics at all, and among those were women of simple, dementing types.

Case No. 5.—This is a forty-year-old white male who is serving a five-year sentence for violation of the Harrison Anti-Narcotic Act. After being in the penitentiary about a year he began to state that President Coolidge had pardoned him. It was noted about this time that he wandered about in an aimless way and could not answer questions correctly. He was transferred to St. Elizabeths Hospital, where he gave a history of having had syphilis at one time, but he did not know how long ago.

Physical examination showed his deep reflexes to be exaggerated. Pupils were slightly irregular and reacted sluggishly to light.

Emotionally he was extremely variable. He came into the examining room cheerfully but soon began to weep. He said we had no right to hold him here as he had a castle in England where he had 2,500 suits of clothes and 53 million dollars in money in the King's Bank. Said he owned 15 ships, 1 saloon, 4 restaurants, and 4 opium joints.

Laboratory findings: Wassermann reaction of the blood serum was

moderately positive, Cerebrospinal fluid: Wassermann reaction, strong positive; protein content increased; cells 44; colloidal gold curve 5555433210.

In the statement made by the patient that President Coolidge had pardoned him there was a definite defense mechanism at work producing a characteristic type of delusion. It would be very easy to say, "Here is a prison psychosis." It is up to a certain point, but the other things in the situation are so overwhelmingly more important that it would be a grave error of diagnosis to put this man down in the prison psychosis category and let the matter rest there.

If you want to find out whether a patient has had syphilis do not ask him if he has had it; ask him when he had it and you will get a much larger percentage of correct replies. Then don't think you have made a diagnosis from the blood Wassermann alone. Lots of neurosyphilitics have negative blood Wassermans, especially if they have been under treatment. I gave a clinic here a few years ago with fifteen or twenty paretics and four, I believe, had negative blood Wassermans. You always have to take the spinal fluid if you want to know whether the central nervous system is involved or not.

In this case we have all the laboratory findings of paresis, not only of syphilis but of paresis. We have a positive blood Wassermann. We have a positive cerebrospinal fluid Wassermann; 44 cells in the fluid—3 or 4 is normal—so that here the cell count is increased ten times; increased globulin content in the spinal fluid; a positive gold curve and the curve is in the paretic zone. That is, a typical paretic gold curve—5555433210. With syphilis and without paresis the gold curve would be lower, perhaps beginning with 2. So here we have all the laboratory signs of paresis. To start with, we have paresis at the laboratory level, as I like to call it.

Also, we have paresis, or a suspicion of paresis, at the social level. I do not know how well this man functioned as a social unit to start with but he was certainly not so mixed up as the record here indicates. He gives a history of wandering about in an aimless way with inability to answer questions, even simple ones. He was quite confused and attracted attention. So at the social level we get implications that there is something seriously wrong, and that is consistent with the diagnosis we find at the laboratory level.

Then at the neurological level we find the deep reflexes exaggerated. That is the rule but it is not diagnostically as important as

if they were absent. You have here the same story as in tabes, where it is much more significant to find the reflexes absent at the knee joint. So in paresis it is much more diagnostically significant if the reflexes are absent but it is more frequently found that they are exaggerated. The pupils are slightly irregular, which is also significant, and react sluggishly to light, which is still more significant. Argyll-Robertson pupil is quite significant of syphilis of the nervous system. The patient does not always have it when we examine him at first but at some stage he will probably have an Argyll-Robertson pupil.

So at the laboratory level we have very distinct evidence of paresis, at the social level there is distinct evidence consistent with paresis, at the neurological level the findings are not only consistent with paresis but are very strongly suggestive of neurosyphilis, and at the psychological level he has these grandiose ideas.

[Patient was asked to repeat "communicability" and "around the rugged rock the ragged rascal ran," but was unable to do so.]

He has typical parietic speech. I can not describe it. It is a peculiar speech, different in different patients. You can get more information by hearing two or three parietics talk than by hearing it described indefinitely. There are a lot of words we ask them to say to bring it out—communicability, perambulator, third riding artillery brigade, etc. The object of having different phrases and different words is to bring into the speech the different types of sounds we make when we talk. We use labials, we use dentals, we use linguals, we use gutturals, etc.—all the types of sounds in speech. The object of these various phrases is to bring out all these different speech mechanisms, because some parietics can say "around the rugged rock" and can not say "perambulator"—in other words the tongue works well but not the lips. Another characteristic is that a parietic may leave parts out, or before he gets through with a sentence he has forgotten the end of it, etc. The same characteristics are shown in the writing. We have some samples of such writing here. Words are left out, letters are left out of words, one letter will be written with a very heavy pressure of the pen and the next letter with a very light pressure—all sorts of irregularities. There are tremors, the writing is irregular, it is not confined to the line, etc. But the parietic speech is a very important thing. I have been called in consultation to see a patient and walked into the room and over to the bed and had the fellow reach out his hand and say, "How'd-do-oo,

Doctor?" and I knew he was a paretic. I don't want to tell you that that is a good way to make a diagnosis. We afterward went over the charts, etc. But that speech is very striking. There is one other speech that strongly simulates it, that I think of now, and that is the speech in multiple sclerosis. That method of diagnosis is what I call the artistic method. I speak of the artistic method and the scientific method. The Germans use the scientific method. If a man comes into a clinic and has nosebleed they will go through a series of accurately worked out examinations and will finally diagnose the nosebleed. The Frenchman or the artist does not have to do that to find out—he diagnoses it at once as nosebleed. Charcot, the great French neurologist, used largely the artistic method for demonstration purposes. He would have a group of cases showing some condition all come into the lecture room at once and walk about. That would give a picture that was ineffaceable and that was carried away, such as the impression you will get of the paretic speech by listening to patients who have paresis.

We will continue this subject in the next lecture.

LECTURE IV

GENERAL PARESIS (*Continued*)

We continue to-day with the subject General Paresis. General paresis is a disease I lay considerable stress upon because whether you become psychiatrists or not it is extremely important that you should be able to recognize it when you see it. The early paretic may not have symptoms that are particularly obvious. They may be quite obvious to the trained eye but entirely obscure to the untrained vision so that only in retrospect is such a patient recognized to have had something serious the matter with him. Yet such an individual may be so impaired in his judgment as to be a serious menace in the position he may at that particular time occupy. For example, a beginning paretic may have a very important administrative position that has attached to it great financial responsibility. If his judgment is seriously impaired he may dissipate a great amount of the funds that are in his keeping before it is discovered and after it is discovered it is too late. Such people sometimes dissipate the funds of their families so that when it is discovered what the trouble is the families, the natural objects of their bounty, find themselves penniless. Such people may be at the head of large concerns and engage in all sorts of wild speculations. To show the degree that an error of judgment may reach in these cases—of course the particular man I will refer to is much more advanced than the patients I have been talking about—think of a man who looks out a second story window and sees a cigar on the ground and just steps out the window to pick up the cigar. That is the kind of thing paretics do. We admitted a patient some years ago, a carpenter, a petty officer in the Navy, I think, who went below the water line in the ship and opened a porthole. Another vessel was lying alongside and that vessel wigwagged that water was running into the porthole. The officers on the ship went below and that is what they found. That is the type of error of judgment we find in the paretic. Then every once in a while we find that some grotesque crime has been committed by a paretic. So it is very essential that in your function as advisers of families you be able to recognize the danger signals of this disease when you see

them because so many things may happen if the disease is permitted to run along indefinitely.

I will show you today a few cases of general paresis, commenting on them as I do so.

Case No. 6.—This is a fifty-five-year-old colored man who was admitted to the hospital about a year ago. He had been picked up by the police for singing and laughing on the streets. On admission to the hospital he was in high good humor, stating that he was a bootlegger who did millions of dollars worth of business a year and that cases of whiskey worth a quarter of a million dollars were expected to arrive at any moment. Said he felt like he was “walking on the air between the earth and heaven.” At times, however, he would suddenly begin to weep and stated that he had just heard messages from his father and grandmother (both deceased) and that they told him to keep on praying all the time. He picked up scraps of paper about the ward and scribbled on them, saying he was making out checks for millions of dollars. He was frequently observed spitting and said he was spitting all kinds of valuables: turkeys, thorough-bred dogs, money and automobiles. He would greet the physician every morning in an effusive way, saying, “Just tell me what you want and I’ll spit it for you.”

The neurological findings were: marked speech defect, tremors of the tongue and hands, exaggerated deep reflexes and Argyll-Robertson pupil.

Laboratory findings: Wassermann reaction of the blood serum completely positive. Cerebrospinal fluid: Wassermann reaction moderately positive, protein content greatly increased, cells 19, colloidal gold curve 5444321100.

This is an advanced case of paresis. You may comment to yourselves upon the fact that I speak rather freely in the presence of these paretic patients about the disease from which they are suffering. If I say, for example, that this man has a disease that a few years ago—before we started our new form of treatment—was necessarily fatal within a maximum period of about three years, that this disease was one that psychiatrists had never seen anyone recover from, that every patient died from it and the average maximum duration was three years—when I say that, as I do, before the patient, you may perhaps think I am rather hard-hearted, cruel and unfeeling, but that is not the case. I do it for a purpose, because I want to let you realize that these people in an advanced stage of this disease do not get what is said. They do not have any insight into their condition. They do not appreciate the significance of such comments, or they have a

mental attitude toward such things that is of a compensatory character of the type I have described to you in the situation psychoses that enables them to discount the whole thing. In other words, one of the symptoms of the paretic is defective intake. He does not take in new impressions at all, and although he may talk very well about the things with which he has become familiar in his early days and may pass a very good examination upon the school knowledge that he acquired as a youngster, still if he tries to acquire anything new he is unequal to it and he is even so with respect to such definite statements as I now make. We designate that as defective intake. [The patient was here asked if he knew what the lecturer had been talking about and he was unable to tell.]

The patient was picked up by the police because he was singing and laughing on the street. Those were the first signs—social maladjustment, symptoms at the social level. When admitted here he was in high good humor, said he was a bootlegger and did millions of dollars worth of business a year, etc. So here we have social maladjustment—social pathology, plus psychopathology—defect also at the psychological level. He felt as if he were walking on the air between earth and heaven—was happy, in other words, a grandiose paretic. At other times he would weep and say he heard messages from his deceased father and grandmother telling him to pray all the time. There was lability of emotions. He would scribble on scraps of paper and say he was making out checks for millions of dollars.

He was observed spitting and said he was spitting all kinds of valuables. That is not an uncharacteristic symbolic expression. I do not remember a case with just this particular idea in a paretic but in the psychoses we may symbolically equate all of the body fluids. As blood, for example, is an exceedingly valuable fluid that we can not afford to lose much of and therefore have to conserve, so spit may also be considered in the same category, or tears, or sweat. In other words, the individual may think of his body fluids in terms of his vital force, just as savages do. You know among the savages any portion of the body, or anything that is excreted from the body, or any part of the body that is cut off, contains the essence of the individual, so that the parings of the fingernails, the hair, or what not, contain the essence of the individual. Therefore it is only necessary that some magic worker should get some portion of the body, as he frequently does, the hair, or the nails, etc., and make it up with mud or wax into a little ball and put it before the fire and roast it, and as the wax con-

taining this material melts away so will the original owner of this material waste away in sickness. I might elaborate that type of symbolism at considerable length and show you how in the development of the history of thought one of the characteristics is the constantly increasing ability of the individual to separate what literally and properly belongs to himself, both as to his body and as to his personality, from that which does not belong to himself. Just as the child fails to realize the difference between the rubber ball on the floor as not part of itself and the foot that sticks out as part of itself—and it is only by a series of experiments that the child learns the difference between the “I” and the “not I”—so the savage and the psychotic hark back to those simpler types of mechanism. This patient, a grandiose individual who thought he was worth millions of dollars, thought that his spittle, which he identified with his vital energy, had become really valuable and he spits all sorts of valuables—turkeys, thoroughbred dogs, money, automobiles.

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Very deteriorated paretic's attempt to write name and year.

Now we have the social findings and the psychological findings. As to the neurological findings, in the first place there is marked speech defect. (The patient was asked to say "communicability" and "Third Riding Artillery Brigade" and was unable to do so.) There were tremors of the tongue and hands, exaggerated deep reflexes, Argyll-Robertson pupil. So we have the social, the psychological and the neurological findings. Now as to the laboratory findings: Wassermann reaction of the blood positive; spinal fluid Wassermann moderately positive, protein content greatly increased, 19 cells, colloidal gold curve 5444321100.

So we have social, psychological, neurological and serological findings all consistent with the diagnosis paresis—the serological findings typical of paresis, the psychological findings typical of paresis, the neurological findings typical of neurosyphilis and suggestive of paresis, and the sociological findings consistent with paresis.

I will show you here an example of paretic writing—an attempt by a paretic to write his name and the date. This is a thoroughly dilapidated attempt at writing name and date.

Case No. 7. This is a forty-two-year-old white woman admitted a little over a year ago. About a year before admission her relatives noticed that she showed a change in personality. She did unusual things, could not put her clothes on properly, became forgetful and indifferent. She became careless in her personal appearance, wasted her money and showed a tendency to sit around the house and weep at times, although when questioned she did not appear sad. During the summer of 1926 her condition grew worse. She was excitable and forgetful and unable to dress herself properly. In December she did not sleep well on several nights and the third night she wished to go out in the street in her nightgown. She talked wildly, said she was a burden to her family and kept asking for her girl friend who was in California. She was taken to a hospital and was later brought here. On arrival here she was euphoric, told a confused story about her troubles. Said she thought the whole thing was due to falling on the street and injuring her spine. When she was first taken ill she saw a bunch of fairies on the street, thought people were throwing colored lights into her face, saw bears and people with funny faces.

Her pupils were slightly irregular and reacted sluggishly to light. Her deep reflexes were hyperactive. There were tremors of the face and hands.

Laboratory findings: Wassermann of blood serum weakly positive.

Spinal fluid: Wassermann reaction moderately positive, protein content greatly increased, cells 17, colloidal gold 555553100.

In August the patient received malarial treatment and had ten chills. At present she is quiet and agreeable but somewhat euphoric and occasionally gives expression to grandiose delusions. At other times she cries and says the nurses put poison in her food.

I will not go into this case in detail. I have brought this patient here because I want you to see a woman paretic and because I want to make certain comments on the relative frequency of paresis in the two sexes. You will remember that I said that the relative frequency as between the two sexes is 3 males to 1 female. I want to qualify that statement and this patient indicates that particular qualification. In a considerable study of the sex distribution of paresis made quite recently this very interesting fact was brought out: that whereas the rate between the sexes is as 3 males to 1 female by and large, still if we compare the ratio of men as against the sterile or nulliparous female and the woman who has borne children, the ratio is different. In other words, the ratio 3 to 1 is the typical ratio of the male as against the child-bearing female, but when the female renounces as it were her biological function, child-bearing, then she has paresis with the same frequency as the male. The only thing we have to say about that is that speaking anthropomorphically, personifying Dame Nature, we could say that this was a scheme of Nature to take care of the reproductive power of the woman and protect her when she exercises her biological function. If she does not exercise her biological function Nature is not so much interested in her. This woman comes within the category of being a sterile female, that is, she has never borne children and so far as I know has never had a pregnancy.

It was stated that the patient became careless in her personal appearance about a year before she came here. It is not uncommon for a paretic man to go to the breakfast table without collar or tie, to begin to be untidy about his clothes—little things of which the family has no measuring rod by which to judge the significance. Then when this patient came here she told a confused story, said she thought the whole thing was due to falling on the street and injuring her spine, that she saw a bunch of fairies on the street, thought people were throwing colored lights into her face, saw bears and people with funny faces. That is almost a delirious type of reaction—we might call it a delirioid type of reaction.

The Wassermann is positive. The spinal fluid is positive—protein is increased, there is pleocytosis, and the gold curve is in the paretic zone.

In the patient as she appears here you see there is a background of general euphoria—she is a good-natured person who is glad to see everybody here and would like to shake hands with them, etc.

Patients do not come to the clinic against their will and one or two of the patients I wanted to show you did not come to-day. I think they were both chief petty officers. The Germans sometimes call general paresis the “officer’s disease.” That is not meant in any way as a disparagement to the officer. The reason general paresis is called the officer’s disease is this: There is an incubation period between the initial lesion and the development of paresis, varying from 7 or 8 or 9 years ordinarily to 10 or 11 and sometimes 20 years. The ordinary seaman in the navy or the soldier in the army may come into the service at twenty, may get syphilis while in the service around that period of life, then may end his three or four odd years of enlistment and leave the service. Therefore he does not come within the group of military paretics. The officer who has syphilis, however, stays in the organization until the last half of the third decade or the first half of the fourth decade, which is the typical time for the out-crop of the paretic symptomatology, and so he comes in the group of paretics in the military establishment. He just happens to be there at the time. It frequently happens that the chief petty officer is a paretic. The chief petty officer is a man who has gone in as an enlisted man, has been unusually efficient, has stayed in the service because he was promoted, and has had increases in pay. He has stayed in the service just like a commissioned officer. If he is twenty when he gets syphilis and stays in the service until he is forty or forty-five he is there when he has general paresis. If he develops mental symptoms at that age it is more likely to be paresis than anything else. If it were dementia precox it would have become apparent before that age. He has escaped that and it is very likely that he has general paresis.

In discussing the situation psychoses I told you that they were precipitated by the stress of the situation in which the individual inevitably found himself, that the content of the psychosis was dictated largely by the environment but that the mechanism of the psychosis depended on the type of personality, the weak lines in the personality along which that personality split. The same thing is true

in a general way in general paresis. We have all types of mental symptoms in paresis. We may have confused paretics, we may have grandiose paretics, we may have paretics with paranoid symptoms and we may have paretics with other kinds of symptoms—manic-depressive, etc. We explain that by saying that in this instance the luetic infection is the stress that breaks the personality. The personality breaks along the line of least resistance, and the mechanism of the psychosis that has developed as a result of the infection is dictated by the type of the personality. The content of the psychosis, again, is more or less taken from the environment.

I will read the record of another patient who did not come to the clinic.

Case No. 8. This is a forty-two-year-old white male admitted to the hospital two months ago. He was picked up by the police in the streets because he was talking in a rambling manner. He told the policeman who accosted him that he had ten thousand dollars coming to him and would give the officer half of it and they would take a long trip together. On admission here he had a washed-out facial expression, was mildly elated for the most part, but occasionally depressed. Said his nerves were all to pieces but that he was happy as could be. Said he was treated for syphilis "several years ago." It appeared on investigation that this man had been working as a clerk and in 1927 he dropped a keg of nails on his foot, severely injuring one of his toes, which had to be amputated later. There was an infection and some toxemia. Shortly after that his wife died and the patient was extremely upset by this. He found difficulty in attending to his duties and psychotic symptoms became apparent shortly afterward. On mental examination his memory was found to be very defective, but no hallucinations or delusions were observed. General intelligence was markedly reduced.

Physical examination showed irregular pupils, which were sluggish to light, fine tremors of tongue and hands, positive Romberg, and absent knee jerks.

Laboratory findings: Wassermann reaction of blood serum negative. Cerebrospinal fluid: Wassermann reaction strongly positive, protein content increased, cells 16, colloidal gold curve 5555542100.

It is stated that on admission to the hospital the patient had a "washed-out facial expression." That is a very characteristic finding in many paretics, a peculiar thing that I can not describe. The Germans call it a masklike face. It is not quite the masklike face of Parkinson's disease but is not unlike it. It is a flattening out of the

ordinary lines of the face, the nasolabial fold, etc. This gives a peculiar appearance. Then associated with that is a peculiar liquid appearance to the eye, especially eyes of light color, with a bluish tinge of the sclerotic coat so that we get a bluish, watery look.

In June, 1927, this patient dropped a keg of nails on his foot and one of his toes had to be amputated later. There was infection and some toxemia. In August his wife died and the patient was extremely upset by this. He found difficulty in attending to his duties and psychotic symptoms became apparent shortly afterward. Now we have here two factors either or both of which may have been precipitating, one the infection and the other the loss of his wife. The question of trauma as precipitating paresis is one of the old questions in psychiatry. The first meeting I ever attended of neuropsychiatrists in Europe was occupied very largely with the question whether blows on the head could cause paresis. That was before the days of the discovery of the spirochete. Briefly, the situation now in regard to this matter is this: We know that paresis is a metaluetic disease, that without lues a person does not have paresis. In nine cases out of ten the trauma plays no part. In nine cases out of ten the trauma occurs because the person is a paretic—because of lack of coördination, he trips because he does not get his feet off the floor. Because of that lack of coördination that is already making its appearance he has the trauma. In a certain proportion of cases paresis is related to the time of head injury. The theory is that the head injury, producing concussion, changes the permeability of the blood vessels in the region of the concussed area so that there is a release of spirochetes through the walls of the vessels into the brain tissue, and in that way it is possible that trauma may precipitate paresis. There were two stresses in this case, the infection and the loss of his wife. In the Russo-Japanese War this observation was made: that more paretics came from the front line trenches than from the rest of the army. Without knowing the incidence of syphilis, of course, as the men in the front line were not chosen with any reference to whether they had a history of luetic infection or not, the presumption is that syphilis was distributed in much the same proportion on the front as in the rear. Why did those in the front line develop paresis more frequently than those in the rear? Because we have again the element of stress. The luetic infection residing in these people a number of years has rendered them more susceptible to stress. With certain pathological stresses going on and their

immunity, as it were, already broken down, then the break comes. So a person with syphilis is essentially a bad risk, or a worse risk when subject to stress than a person who has not had syphilis. So the general proposition I have made year after year has been that people who occupy important positions, positions of large responsibility, especially positions such as a captain in the navy or an officer commanding a regiment, where the lives of a great many people are more or less dependent upon their wisdom and judgment and quickness of response, etc.—that people should not occupy such positions if they have syphilis, irrespective of whether they have developed or ever develop parietic symptoms. If you knew the inside history of many catastrophes in the business world, in all sorts of important positions, you would find that frequently things go wrong because the fellow at the head of the job had begun to lose his judgment because of the onset of paresis or was unable to measure up to stresses that persons in first rate health could handle effectively in similar circumstances.

Case No. 9. This is a fifty-year-old white man who has been in the hospital nearly six years. About four years before admission he became dizzy at times, had headaches and was "nervous and jumpy." Blood tests at that time were negative, but spinal fluid showed 4 plus Wassermann reaction. He received antiluetic treatment and improved a great deal. A few weeks before admission, however, his symptoms returned. He had incontinence of urine and some difficulty in walking. He was sent to a sanitarium and transferred from there here with notation that he had memory defects and some impairment of intelligence.

Physical examination showed positive Romberg, unequal pupils with Argyll-Robertson phenomena, and diminished knee jerks. Wassermann of the blood serum was negative. The cerebrospinal fluid was 4 plus Wassermann reaction, protein content slightly increased, cells 12, colloidal gold 5544321000.

He had difficulty in walking and remained in bed most of the time and was somewhat childish in behavior.

In May, 1923, he received malarial treatment and had 15 chills. Following this he began to improve and for several years now has had ground and city parole. Recently the idea has been taken up of putting him out on a visit and allowing him to employ himself. It is not felt that he could return to his former occupation of linotype operator, but he might adjust on a somewhat lower level.

Recent examination of the cerebrospinal fluid showed: Wassermann

reaction negative, protein content slightly increased, cells 5, colloidal gold 00111100000.

This patient has been with us for some time. He is very glad to come to the clinic. You will notice nothing in his general appearance that would suggest that he is a paretic, and yet he is a paretic, or he had paresis. Symptoms of paresis began something like ten years ago, and he had had symptoms of paresis for about four years before he came to the hospital. Initial infection was over twenty years ago but symptoms of paresis antedated his admission here four years. A man who has had paresis four years is not a very good risk to start with. Before we began to give malarial treatment for paresis the average maximum time that a patient lived after symptoms of paresis began was three years, but this man had had symptoms of paresis for four years before he came to the hospital. When symptoms of paresis began he had dizziness, headache, etc. The blood Wassermann test at that time was negative but the Wassermann reaction of the cerebro-spinal fluid was four plus. Remember what I have already said—do not ever rule out paresis on the blood Wassermann. Do not think that because the blood Wassermann is negative the patient can not be a paretic. It frequently happens that a person with lues of the central nervous system has negative blood Wassermann, especially if he has been under intensive treatment, but you can ordinarily give all the mercury and all the arsenic the trade will bear to a paretic without changing his spinal fluid Wassermann. So before malarial treatment came into use we spoke of the paretic as being "Wassermann fast," that is, so far as his spinal fluid Wassermann was concerned it could not be made negative.

When symptoms of paresis began in this case this man received intensive anti-luetic treatment and improved a great deal. A few weeks before he was admitted here, however, his symptoms returned. He came here with the notation that he had memory defects and some impairment of intelligence. Let me introduce here the remark that there does not seem to be any accurate correspondence or parallel between the symptoms of mental defect and the real seriousness of the paretic process. I have in mind a lieutenant who was here in the old days, who had well marked paresis. As many as three times at least during his residence, and this was before the days of arsenical treatment—as many as three times during his residence here I saw him in bed perfectly helpless, drooling at the mouth, spoon-fed, prac-

tically unable to articulate so that anyone could understand him, his mind apparently as nearly a blank as could be. And in each instance he rallied sufficiently to be able to beat anybody in sight at playing bridge. So the discrepancy between the situation into which a paretic may be precipitated, the appearance of his condition as indicated by the mental symptoms, and what he may actually retain in the way of mental integrity, is very, very great. When we hear talk of impaired intelligence in a paretic, therefore, we have to take it with a few grains of salt because if you can do anything to clear up a paretic process you will find that many symptoms that appeared to indicate permanent loss will disappear. I do not know that we can explain this, but we think of it in terms of localized edemas and toxemias, etc. If you have seen a paretic brain freshly taken out at autopsy you will know why we think of it in that way. You will see a wet brain, you will see the lymphatics running parallel with the blood vessels filled with white fluid containing the phagocytic cells which are transferring detritus, the results of the destruction of the paretic process, to the circulating medium. You see this destructive process going on in the nervous system, the products of destruction being eliminated as fast as they can be transferred to the blood stream. It is not difficult, therefore, to see how this process frequently results in local edemas, toxemias, etc.

When this patient came here in 1922 with paresis of four years' duration he had negative blood Wassermann. Wassermann reaction of the spinal fluid was four plus, protein was slightly increased, 12 cells, colloidal gold 5544321000. Neurological symptoms were positive Romberg, unequal pupils with Argyll-Robertson phenomenon and diminished knee jerks. He had difficulty in walking and remained in bed most of the time and was childish in behavior to a certain extent. In 1923 he received malarial treatment and had 15 chills. Following this he began to improve and for several years now he has had ground and city parole. You see he has been with us six years and a little over four years ago he had malarial treatment, and from a person with a condition of apparently impaired intelligence and a good deal of incoördination, etc., he began to improve and now he not only goes out on the grounds but to the city. Recently we have considered letting him go on visit so that he can employ himself in some way. It is not felt that he could return to his former occupation but he might adjust at a somewhat lower level. Recent examination of the spinal fluid showed Wassermann reaction negative, protein

slightly increased, 5 cells, colloidal gold 0111100000. Before malarial treatment the Wasserman of the spinal fluid was fast, could not be influenced, now it is negative.

At the laboratory level he is cured, at the neurological level he is cured, at the psychological level and the social level he is cured, so far as any positive symptoms are concerned, but remember—and this is a thing you want to bear in mind with this malarial treatment—this man had paresis for four years before he got here. Paresis in its pathology is essentially a parenchymatous degeneration involving the cortical cells in actual destructive processes. So that we have from the beginning a process which tends toward destruction and which actually produces destruction of parenchymatous nerve tissue. I am thinking primarily here, of course, of its relation to the functions of the mind and the cerebral cortex,—although the cortex is not the only organ involved, its involvement is what primarily interests us in this connection. We have here a destructive process going on in the cortex. Now you cure your infection but you do not restore the destroyed nerve cells. You know that when you destroy a cell of high complexity or even of moderate complexity it does not reconstitute itself. We do not get restoration of nerves. If you cut a peripheral nerve you may find the nerve reconstituting itself, but not a nerve cell. If you destroy the cell as in the cerebral cortex you get no new growth. Therefore, with four years of paresis antedating this man's admission we can cure his syphilis and his paresis perhaps—I say perhaps because we do not want to make excessive claims, but we are beginning to think of paresis in terms of cure. We can cure his paresis perhaps but we cannot reconstitute those cells that have been destroyed. Therefore we must expect a certain residual mental pathology and such an individual when he goes back into the world will have to make a social adjustment at a lower level than he did formerly. We injected our first case of paresis with malaria about 5 years and 2 months ago. I saw that man a short time ago running an elevator in one of our principal hotels and he was doing a perfectly good job. Running an elevator is somewhat confusing, especially when there is a club meeting and the people want to get off at different floors, etc., go beyond where they want to go and want to go back—there is a certain element of confusion. Nevertheless he was doing a perfectly good job. Perhaps he cannot function as well as he did before he had paresis, and in that sense there has not been a 100 per cent

restitution. It depends on how you use the word cure, but as far as we are able to determine by the laboratory signs, the neurological signs and the psychological symptomatology that man is well with a certain amount of defect, which defect means that he has to make his adjustment at a somewhat lower social level. But it is a good deal better to be an elevator conductor than to be dead.

LECTURE V

GENERAL PARESIS (*Continued*)

In the last two lectures the subject has been general paresis and in the last lecture I gave you some very superficial ideas of the pathology of that disease. The main point I wanted to bring to your attention was that it is a parenchymatous syphilis. A great deal of the syphilis we see is not fundamentally parenchymatous but is mesoblastic, for example aortitis, and is much more amenable to treatment with arsenic. In paresis we have a different type of the disease, a type that Professor Kraepelin has called metaluetic, meaning beyond syphilis, a late result of the disease; and whereas in the pathology of the disease we find interstitial, vascular and cellular lesions, it is the cellular lesions that are of most consequence from our point of view, the interstitial and the vascular being more amenable to treatment and the parenchymatous not. So up to a few years ago, rounding out the hundred years during which we have known the disease, it has been, as I told you, inevitably fatal. Every patient died, and within a maximum average period of three years from entrance to a hospital. Now within the past few years we have developed a different method of handling the disease. As you know, with the Ehrlich side-chain theory, that is, the development of 606, our hopes were very much raised that something could be done therapeutically for this metaluetic involvement of the nervous system, but those hopes were not realized. Various kinds of treatment were tried, 606 was given intravenously, metallic mercury in liquid emulsion was given intramuscularly, salvarsanized serum was given intrathecally in the spinal cord, then through trephine openings in the skull, and still later in the large cisternae of the brain, the idea being to bring it closer and closer to the actual specific cerebral lesions, and whereas a certain increase in the duration of the disease was obtained very little that looked like the possibility of actual cure was brought about.

Some years ago Professor Wagner von Jauregg, of the University of Vienna, started a series of experiments for which he was recently awarded the Nobel Prize for Medicine. He tried various kinds of

infectious agents. His first experiments were with tuberculin. Subsequently he tried a number of other infections, the most noted until the present one that I will speak about being that of relapsing fever. Then the idea occurred to him of inoculating paretics with malaria. Other things have been used too, more particularly and more recently rat bite fever has been used. The idea of the malaria inoculation evidently arose largely from purely empirical observation, which was to the effect that armies that had been stationed in tropical countries did not develop the same percentage of paresis that armies stationed in other places did and the supposition was that possibly the tropical infections protected the soldiers in some way from paresis, because the amount of luetic infection was not dissimilar in the two groups. So Professor von Jauregg tried the inoculation with malaria. He made some interesting reports which attracted my attention in the Viennese journals shortly after they began to be published. Then Professor Weygandt, Director of the Hospital for Insane in Hamburg, whom I happened to know quite well, was in this country and was invited by the New York Psychiatric Society to tell his experience with malaria inoculation for paresis. I went to New York to hear him and had a considerable conversation with him about it afterward. He is a very skillful laboratory man aside from his special psychiatric qualifications, and I was so impressed with his story that I decided to try the treatment here.

So we started the malarial treatment of paresis five years ago last December. After we had treated a group of 103 patients for a period of some three years after their original inoculation with malaria we made a graph of the result of treatment in those 103 cases and measured it over against a graph of the result of treatment of 103 patients drawn seriatim from our files who had not been treated with malaria but who had had all other kinds of treatment, including various arsenicals, especially 606, and tryparsamide and mercury, with the following result:

Comparison of paratic patients, untreated and treated with malaria, over 3 yr. period.

Untreated with malaria						Treated with malaria					
Scale	No. of Cases	Improved	No Change	Worse	Dead	Scale	No. of Cases	Improved	No Change	Worse	Dead
100	103	12	3	9	79	100	103	66	9	16	12
90						90					
80						80					
70						70					
60						60					
50						50					
40						40					
30						30					
20						20					
10						10					
0						0					

Of the 103 who were not treated with malaria there were 12 that were improved, 3 in whom there was no change, 9 who were recorded as having gotten worse, and 79 who were dead. Now these diagnoses—"Improved," "No Change" and "Worse"—were not left to individual physicians. We constituted a Paretic Board and this estimate as to whether a patient was improved or worse or unimproved was taken from the entire picture—the clinical picture at the psychological level, the neurological picture and the laboratory picture, that is, the condition of the Wassermann of the blood and of the fluid, cell count in the fluid, etc. I will compare with that the results in the 103 cases treated with malaria. Of those not treated with malaria you will remember there were only 12 improved; of those treated with malaria 66 patients were recorded as improved. Of those not treated with malaria 3 were recorded as not having undergone any appreciable change; of those treated with malaria 9 are so recorded. Of those not treated with malaria 9 got worse; of those treated with malaria 16 got worse. The point I want you to take away in your minds is this: of those not treated with malaria at the end of the three-year period 79 were dead, of the 103 nearly 79 per cent were dead; of the 103 patients who were treated with malaria at the end of the three-year period only 12 were dead. That difference in the deaths, it seems to me, is the most significant thing in the picture—12 as against 79.

The treatment with malaria is carried out roughly in this way: the malarial plasmodium is injected directly into the blood stream either intravenously or by introducing a hypodermic needle under the skin and moving it around to break a few capillaries with the point of the needle so that the plasmodium can get directly into the blood. The blood that is used is the blood of a patient with malaria, and the plasmodium has to be very carefully isolated and identified by a competent bacteriologist because we want the pure culture of the plasmodium of the benign tertian type of malaria. If you get the estivo-autumnal type of malaria you will have a malignant type of another disease and of course the chance of death from malaria will be increased. It is very necessary, therefore, to have a pure culture of benign tertian type. It is very difficult to get it. The only way is to have lookouts all over this part of the country for patients coming from the tropics with malaria and catch them before they are treated, because the benign tertian variety of malaria is very amenable to quinine and after a few doses of it the chance of getting the

plasmodium is gone. So we have to get the blood of untreated patients with benign tertian malaria. We use the blood only of patients with negative Wassermann. We do not use the blood of a patient with positive Wassermann reaction. That is a precaution I have taken out of abundant caution and because we have a very profound respect for the possibilities of mistakes by a physician. One perhaps might, theoretically at least, introduce Wassermann positive blood into Wassermann negative patients. That is a danger, however, that is apparently not very great. There was an experience in Washington a little while ago that is exceedingly illuminating on this point. A patient who had suffered some kind of injury resulting in considerable loss of blood was admitted to one of the hospitals. It was necessary to save his life by transfusion, and it was necessary to act very rapidly so that the patient would not die. A donor was obtained and two pints or more of blood was taken from the donor and injected. After this had been done the Wassermann of the donor was taken and it was positive. The Wassermann of the patient was negative. He was nonsyphilitic. The doctor was very much interested and followed the case along and repeatedly took the patient's Wassermann, and the Wassermann was never found to be positive. That shows how noninfectious the old luetic really is. If the donor had any organisms in his blood there were so few that they did not produce syphilis in the person who had received possibly a quart of his blood. However, we do not use Wassermann positive blood for this injection.

As I have stated, it is difficult to get the plasmodium. We cannot cultivate it in the laboratory as we can many organisms. We can only get the blood directly from a patient or use mosquitoes. We have tried the use of mosquitoes, by letting the mosquitoes bite the patient, but that does not work very well. Even inoculation with malarial blood does not always produce results. Particularly among negroes, who apparently have an immunity, the results are not good.

After the blood is injected the patient is permitted to have a series of malarial paroxysms. The number of paroxysms he is permitted to have varies with the condition of the patient. Occasionally a patient may die as a result of the malaria. Remember that if he did not have the malaria he would certainly die. Malaria is his only chance, so we do not feel that we are subjecting him to any additional risk by inoculation with malaria. Deaths from the malaria are very rare but they do occur and we have to take precautions, where there

are advanced cardiac lesions, etc. The patient is permitted to have as many chills or malarial paroxysms as his physical condition will permit because the improvement seems to be, roughly speaking, in direct proportion to the number of paroxysms he has had and the height of the temperature he has had in the paroxysms. So we like to see high temperature and as many paroxysms as possible, about fifteen. Then after the patient has had as much malaria as we think he can stand, one or two stiff doses of quinine wipe out the fever and the patient is over the malaria.

An interesting thing happened. There have been a number of reports of malarial treatment of paretics that are contradictory in many details, and we think we have discovered why. We have watched our patients now over a period of years and we find that it depends altogether on whether we take the findings at the end of 6 weeks or 4 months or 10 months what the findings will be. In other words, the improvement which is initiated—if it is initiated at all and in some cases it apparently is not—is continuous. That improvement shows at the psychological level, at the metabolic and laboratory level and at the neurological level, and it goes on apparently continuously over a period of at least a year. So you can readily see that reports that are based on findings at any period between the time of treatment and the end of the first year are apt to be contradictory unless they are all taken at the same time. You need not be surprised if a patient does not show marked improvement immediately but if let alone he will continue to improve over a number of months, for at least a year. Improvement is shown in all these spheres and for the first time we get negative Wassermann reactions in the spinal fluid, a thing unheard of in the period when we used arsenic. Arsenic did not make the Wassermann reaction in the spinal fluid negative and as I told you we had come to think of the parietic as Wassermann fast.

What produces this result of treatment with malaria we do not know. My own feeling is that the temperature is at least a very important element in the result. The spirochete of syphilis does not stand high temperatures well, and I suspect therefore that fever is the lethal agent, or that if it is not the only one it is an exceedingly important one. The fact that the fever repeats itself every other day is an element which makes it more lethal than it otherwise would be. The spirochete, so to speak, is made rather weak in the knees by the first attack of fever. Then there is an intervening day when

there is no fever and he struggles back on his feet. Before he is really strong again he is hit with another attack of the fever. That keeps up fifteen times and at the end of the last attack he "lays him down and dees." Whether that is a correct interpretation of the mechanism I do not know but we know that the spirochete can be killed in laboratories by putting it in a thermokrit and raising the temperature to approximately 103, whereas in malaria the temperature is 104, 105, 106 and sometimes more.

Aside from the possibility of the cure of paresis, you see the life duration is very greatly extended. The remissions are very considerably increased in number. Paresis if let alone will spontaneously have remissions in a certain proportion of cases. When making a prognosis in paretic cases irrespective of any treatment you must take into consideration that occasionally the symptoms all clear up. The family will say the patient is well and the doctor made a mistake, unless you have warned the family that that very thing is liable to happen. By the most generous allowance as to the number of remissions that take place without treatment—and what constitutes a remission is after all a matter of definition, whether it is a remission if the patient improves somewhat for a week or ten days or whether we shall exact a period of three months as a matter of definition or agreement—by the most generous interpretation we can make of a remission we could not possibly say that without treatment there are more than 15 per cent of remissions in paresis, in fact I am sure it would be much nearer right to say 10 per cent, whereas with malarial treatment irrespective of cure at all we get 40 to 45 per cent of remissions, based on the same definition. The discrepancy is so great that I am sure we have a right to attribute it to the malaria.

What is the final result of the malarial treatment? Let me say something of the patients who presumably get well, for while we still talk very cautiously about cure we are beginning to talk in terms of cure of paresis. We think we have a right to do so because the symptoms on which diagnosis is made disappear. The Wassermann becomes negative, the mental symptoms cease to progress and many of them clear up, the neurological symptoms calm down—some may disappear and some not, depending on whether there has been cellular destruction or not. All the symptoms on which diagnosis is made stop progressing or disappear. Clinically we say we have a right to speak of cure with one exception. A majority of the paretics who come here are admitted to the hospital after they have had

paresis for some time. I showed you a patient last week who when he got here had had paresis four years. Paresis is a process of cellular destruction. A man who has had cellular destruction for four years is bound to have permanent injury. Those cells cannot be restored to normal physiological or anatomical integrity. You may cure the disease and destroy the infection and prevent further progress and yet the patient is left with a certain amount of disability. So our paretics are left with a certain lowering of the level of efficiency with which their minds may operate and therefore when they get well, as I think we can say they do, they have to make a social adjustment at a somewhat lower level.

One other point regarding the cure of paresis. Under the microscope the cerebral cortex shows a very clear-cut and unmistakable picture of the ravages of this disease. Recalling the anatomy of the cortex, you will remember that the cells of the cortex are regularly arranged in layers. The cortex is a laminated structure and the polarity of the cortical cells is oriented at right angles to the surface of the cortex, so you have a very definite picture of cells arranged with the polarity all running in the same direction and arranged in definite layers—a picture, in other words, of order. We speak of this orderly arrangement of the cortex as the architectonics of the cortex. Now a patient with paresis gives a very different picture under the microscope. The appearance of the cortex under the microscope in the paretic has been described as “wind blown,” that is, as if these cells had been subject to a strong wind that had blown them all askew. Their polarities have all been interfered with so that they are no longer oriented at right angles to the surface of the cortex but are at all conceivable angles. Many of the cells are individually destroyed and remain as what the pathologists call “ghost cells.” All the phagocytic cells are engaged in taking away the products of destruction and dumping them into the various lymph and blood streams, clearing the cortex out. Here we have, then, a wind blown cortex. Several of our cured paretic patients have died of something other than paresis. Of course there is no reason why a patient who has recovered from paresis should not die of pneumonia or something of that sort. We have been able to examine the brains of these patients who had recovered from paresis and had died of something else. We know the pathology of paresis better than that of any other disease that can with propriety be called a mental disease. The pathology of paresis is quite definite and has been quite well known

for a number of years. So when the paretic brain comes to section we know what we may expect to find. The principal thing I want to call you attention to is this wind blown appearance of the cortex. In the cured paretics this wind blown appearance was not there. There had been a reconstitution of the architectonics of the cortex. I do not mean that destroyed cells were replaced by normal cells—that had not taken place—but the increase in neuroglia cells, the small round cell infiltration of the cortex, the migration of the phagocytes, the new tissue formation—all those things had subsided. What had happened was that as soon as these pressures and disturbances had been removed the various cortical cells had gravitated back into the orientation which normally belonged to them. Just what produces the polar orientation of the cortical cells is perhaps open to question. It has been very exhaustively studied by Professor Kappers, the Dutch anatomist, and I can commend to you in the highest terms his work on this subject. There are electrical currents that at least are flowing through the nerve cell and the orientation of the nerve cell with reference to the surface of the brain can be thought of in terms of the polar orientation of an electrically charged unit. Not that the whole thing is to be explained by electricity by any means, but you know every nervous discharge is accompanied by an electrical current which can be actually measured with the galvanometer. That is due to the fact that every chemical change is accompanied by a change in electrical potential. So we can at least in talking about this think of the electrical aspect of it, that being only one aspect, and realize that the energies that are at work are of the same orienting nature as the electrical energies and as soon as these various disturbances are removed the orientation reconstitutes itself.

So we have actual post-mortem and histological evidence that our paretics are cured. You will remember that I told you that I recently saw the first patient we injected with malaria running an elevator in one of the big hotels in Washington.

MENTAL DEFICIENCY

The first group of cases I showed you were the prison psychoses, and my reason for showing them to you was that they presented psychological mechanisms that were simple to demonstrate and easily understandable. I next showed you paretics because I wanted to

show you patients that were fundamentally classified with the infectious disease group, problems with which you are already more or less familiar. I now want to take up the idiot and imbecile group because here we have a group of patients who are so manifestly and profoundly involved that you will have no difficulty in seeing the picture.

Imbecility and feeble-mindedness are relative terms. Until recently there has never been any effort to define them with any degree of accuracy. In the old days they were defined with reference to capacity to learn. An idiot was an individual who was unteachable. An imbecile could be taught to look after the ordinary habits of going to the toilet, eating reasonably well, etc., simple habit instruction of that sort. Feeble-minded people were still higher—they were capable of functioning with a certain amount of economic efficiency under favorable conditions. Even now the definition of feeble-mindedness as brought out by the British Commission some years ago is practically based on a standard of economic or social efficiency. The feeble-minded person is the person who under favorable circumstances can take care of himself. The older definitions of idiocy and imbecility were that they were defects with which the individual was born and therefore were supposed to be hereditary. The idiot or the imbecile had never had an efficient mental organization. The insane person, by a parity of reasoning, had had an efficient mental organization but had lost it. Our definition now between what is inherited and what is acquired is a good deal more vague than it used to be, just as we used to know all about syphilis until someone came along and discovered the spirochete and then we found we knew nothing about it. As soon as we find out anything about a thing we know how vague our problem is and how many difficulties it presents. So now in defining idiocy and imbecility instead of always laying it to the germ plasm we talk of defect with which people are born and substitute the term congenital, realizing that people come into the world with certain defects that may not be from the germ plasm at all.

Most babies when they come into the world from the point of view of the male all look alike. The women, particularly the mothers, see differences in these newborn children, they begin to have personalities immediately for the mother, but for the man of the house they look very much all alike, and they look alike because they come from a standardized environment. All of the higher animals that are born after a period of incubation either in a uterus or in an

egg come from a standardized environment. We know perfectly well that if for any reason the standards of that environment change we get a different kind of individual, and we know from experimental biology that those changes can be made very tremendous without involving in any way the explanation that they have to be brought into the picture by the germ plasm. For example, if you give Stockard, Experimental Biologist of Cornell University, an order for fish with one eye in the middle instead of one eye on each side he will produce them, not because he has a germ plasm strain he can make use of but because he can take embryos at an early stage and by immersing them in various types of chemical solutions interfere with that development which produces a balanced bilateral growth, and so interfering with this bilateral spread of the individual and concentrating the growth that instead of one eye on each side of the head one eye appears in the middle. So almost any kind of monstrosity can be produced by laboratory methods without reference to germ plasm. If we get back to germ plasm we find that it is a highly complex affair with chromosomes, not all alike, but different, a very complicated thing upon which immediately all sorts of chemical forces begin to operate in a way that may bring about all sorts of changes in the final result. So that our idiots or imbeciles come into the world for some reason with a lesser capacity for mental development, whether in the germ plasm or from a change in standards of environment, or whether as result of injury, forceps delivery, contracted pelvis, hemorrhage into the brain, or what not, does not make any difference for our purposes.

As to the methods by which idiocy and imbecility are diagnosed, and what are the principles of differentiation: These principles of diagnosis and differentiation date back to Professor Binet, of Paris. I recommend that you read his original contribution if you want to see a beautiful piece of clear-cut reasoning and deduction. He developed a number of tests over a considerable period of years by testing thousands of children, the so-called tests of intelligence. You know the Binet-Simon test of intelligence, as it is called. What intelligence is we do not have to answer. Here is a measuring scale for it. I do not know that anybody can tell what intelligence is, none of the psychologists seem to know, but a scale has been developed to measure it. It is a practical sort of scale. It consists of a series of questions and answers and in proportion to the success of an individual in answering the questions he can be compared with a

normal child, the normal standard having been determined by testing a lot of normal children and finding what sort of questions they could answer at different age periods. Without going into details, here is a series of questions divided into age periods, or tests, beginning at three and running to twelve or fifteen years of age. These questions can be answered by a normal child. In proportion to the ability of an individual to answer these questions, is he or is he not defective? Therefore there has arisen the diagnosis of intellectual age, or mental age, as it is called. If an individual measures up to the age of nine, that is, if he is able to pass the test an ordinary normal child can pass at nine years of age, we say he is mentally nine years old. So we have this series of tests and we subject our patients to the tests and make a diagnosis of the mental age. We may make a diagnosis of any kind of age—physiological age, for example. The thymus ought to disappear at adolescence. If one has a thymus after adolescence we say he is physiologically younger than a person who has not because he retains a physiological characteristic belonging to the period of infancy. The point is that here we make a functional test of mental capacity as compared with the mental capacity of the normal child, and we are therefore classifying our patients in terms of mental age as distinct from chronological age, the chronological age being the age expressed in the number of years we have lived. So we may have an individual of thirty or forty or fifty or sixty or any other chronological age who can not pass a mental test higher than five or six. Though he may be forty chronologically he may be only six mentally. As a result of that method we have this classification:

The idiot is a person who can pass only the first two years; the imbecile is a person who can pass only between the end of the 2d year and the beginning of the eighth and inclusive of the seventh; the moron is an individual who can pass from seven years to twelve years. Above that are the feeble-minded, and, if you wish, above that the retarded.

That appears to be a very clean-cut classification but as a matter of fact there is no clean-cut classification. The only purpose of this classification is to enable us to handle the matter linguistically and create our thoughts of it and deal with the individual with some measuring rod so as to get some idea of what it is all about. When we deal with the organism as a whole, the thing I constantly come back to again and again, there is a difference. When we are dealing with mental age we are dealing with only one part or aspect of the

organism. If you have 20 or 30 or 40 boys who measure to the same psychological age, the only thing they will have in common will be that they measure to the same psychological age. They will have their own peculiar personalities, some will be good boys, some will be bad boys, etc.

Case No. 10. This patient is classified as an idiot. A ten-year-old white boy admitted to the hospital three years ago. Before his admission here his parents allowed him to run wild in the streets and several times he narrowly escaped being run over by passing vehicles. Finally the police interfered and forced the parents to send him to the hospital.

On admission here it was impossible to question this boy in any manner. He was destructive and very untidy. During his stay at the hospital he has been very restless. When he takes a fancy to anything he screams at the top of his voice and if it is not given to him at once he tries to break things about him. He tears up flowers by the roots if he can get at them, breaks windowpanes, tears the bedding to pieces and climbs up about the windows and the radiators.

Since being at the hospital he has learned to say a few words but can not make connected sentences. He has tantrums from time to time during which he will scream and tear things up.

The presumption is that this patient comes under three years of age mentally.

Case No. 11. This patient is classified as a high grade imbecile. A sixteen-year-old white boy who was admitted to the hospital four years ago. His father was alcoholic and his mother was feeble-minded. He was sent to the hospital because he choked a baby and would probably have killed it had not help been at hand. He was also found tormenting a horse.

During his stay in the hospital he has been restless and unreliable. He teases the old and feeble patients about the ward and would be cruel to them if permitted to do so. At times he has outbursts of temper.

On Sept. 19, 1922, patient was given a psychometric examination which recorded him as five years and two months. This examination was repeated several months ago and it was found that he is now five years and four months, having gained two months in four years.

[The patient was asked if he had teased other patients on the ward. He replied that they had teased him.]

The patient states that others teased him. One of the tragedies of the feeble-minded is disclosed by that statement. As a rule the feeble-minded boy in the community would, if let alone, do no harm.

His sins are only of omission, he would be shiftless, would not be industrious or energetic, etc. Now the other fellow, perhaps not a boy but a grown person, begins to tease him. He is feeble-minded, not only intellectually but the same degree of feeble-mindedness encompasses his emotional reaction, and we cannot expect this feeble-minded boy to have the same sort of control that normal individuals have. He is teased by his associates, or grown people, or the people that hang around the corner grocery store, and one day he picks up a brick and hits someone over the head and kills him. The feeble-minded are not as dangerous as they are said to be. In such a case the killing would not be due to the dangerous tendencies of the feeble-minded but to the cruelty and teasing of people supposedly normal.

LECTURE VI

MENTAL DEFICIENCY (*Continued*)

I will continue with the subject mental deficiency and will show you now a group of patients whose cases I will discuss more fully later.

[Five patients were shown, their psychological ages being, respectively, nine years, nine years, eight years, ten years, ten years.]

I want you to see that these girls are perfectly normal in appearance. They are nice looking girls, they are well behaved and useful girls in this community. They are very good citizens here and we are glad to have them with us.

I will make some general remarks about the feeble-minded group and then some specific remarks about the patients we have just seen.

The feeble-minded child as it exists in the mind of the layman, the man in the street, is practically 100 per cent a myth. The reason for the myth is not far to seek. Until we had institutions for the feeble-minded and came into contact with them in considerable numbers and really learned to know them the only feeble-minded people that anybody knew anything about were the comparatively few feeble-minded children in the community who came to the attention of the authorities, usually because of some atrocious kind of anti-social behavior, either because they committed some serious crime, perhaps murder, or because they were prostitutes or repeated offenders of one sort or another. In many instances their behavior was even worse than that in a certain sense. They were absolutely uncontrollable in any sort of way. They gave way to all sorts of violent tantrums and could not be handled. When they got into the institutions they were discovered to be incorrigible and they came very rapidly under some sort of disciplinary control which never worked. They were the terrors of the reformatory type of institution.

Now here was really only a handful of the feeble-minded, but they were the only ones people came in contact with and they developed their concept of the feeble-minded based on these few really very exceptional individuals that came to their notice. That is an entirely mythical concept of what the average feeble-minded person is. The

average feeble-minded person is by no means badly behaved or vicious in tendencies. On the whole, the feeble-minded are a good-natured, tractable, easily controlled group of children, in the literal sense. You will remember the boy I showed you at the last lecture who said he did not tease anybody but that other people teased him, and I told you that he had in that sentence expressed the tragedy of the whole feeble-minded group. The difficulty with the feeble-minded, as Mr. Johnstone, of Vineland, used to say, is not so much what the feeble-minded do as what people do to the feeble-minded. You will recall that I told you that a feeble-minded boy might kill someone because he was teased by presumably normal people.

These nice looking girls you saw here, whose psychological ages are from eight to ten, are absolutely helpless in the outside world, where they naturally drift into some kind of prostitution or petty offense. They cannot be expected to do anything else, are incapable of doing anything else, and they are exploited by presumably normal individuals. I will read from the records in these cases, to give you an idea of the type of individuals you have just seen.

Case No. 12. This patient has been here four years now. Family history negative as far as obtainable. Because of ill health she did not go to school until she was twelve and at sixteen she left to go to work; worked in department stores and did simple, unskilled laboring jobs. At the age of eighteen patient was seduced by a young man whom she regarded as her fiance. He left her and following that she had promiscuous sexual relations for a while. She was picked up by the police and sent to the hospital.

Several years ago this patient went home on a visit but her parents were unable to exercise any control over her. She associated with dissolute men and on being returned to the hospital it was found she had contracted gonorrhea. At present she is working on the ward and is doing excellent work, is quiet and agreeable. Mental age nine.

Here is a girl who is perfectly helpless in the ordinary community—exploited by apparently normal youths, leading a life of clandestine prostitution, acquiring venereal disease and having all the behavioristic patterns that are conceived as so terrible in the minds of the uninformed and the prudish. When she comes here what do we find about her? What sort of girl is she? She is as nearly literally a Sunday-school type of girl as one can find. She is busy all day long doing things for other people. She is good natured,

she is agreeable, she is tractable, she is gentle, she is accommodating. She never says a vulgar thing, she does not swear, she has none of the characteristics one might suppose, if he did not know these people, to belong to that type of person. She is a good little girl and a perfectly good citizen, well conducted and useful in a protected community, whereas in an outside community she is not only a 100 per cent loss, but worse, because she becomes, with others of her kind, a nucleus for the spread of moral and physical and social disease and degradation.

Case No. 13. This patient is forty and she has been in the hospital five years. Her father had tuberculosis, her mother also had tuberculosis but died of puerperal septicemia; a maternal aunt had dementia precox and died in this hospital. Patient has had seven brothers, one of whom was still-born, one died in his first year of cholera infantum. She has a brother of twenty-seven who is said to have "trouble with his head."

She went only as far as fourth grade in school. She went to work at a hospital and had an illegitimate child by an attendant. She worked in various places after leaving that hospital and was finally sent to a poor farm as she could not take care of herself. She again became pregnant and was sent to a home in the city where her child was born. She was then returned to the poor farm and helped with the house work there for several years. Then she became pregnant and was sent to the County Hospital, where her child was born.

Since being in this hospital the patient has adjusted very well, has helped with the ward work and in the dining room, is quiet, neat and gives no trouble. Mental age nine.

Note the difference between the degree of social liability of such a person in a protected community and such a person outside in an unprotected community. Feeble-mindedness has a very large hereditary component. It is a Mendelian recessive, as far as we can use such terms about a complicated affair like feeble-mindedness, but at any rate it is largely hereditary. This girl had illegitimate children as often as she had opportunity. She had nothing to say about it, did not seek the male and seduce him, was just helpless. Such girls as these treat their children much like normal children treat dolls. As a normal child might leave a doll on a windowsill in a snowstorm just so such a girl might leave a child on a windowsill in a snowstorm. So long as these girls have the care of their children the children do not live, as a rule. The children have a very high rate of mortality, depending on the amount of care received.

Case No. 14. This is a twenty-two-year-old white girl who has been in the hospital a little over five years. Very little is known of her family history except that her mother kept a house of prostitution. Patient had a meagre education, learned to read and write but practically nothing more. She went to live with her mother and was promiscuous sexually. Her mother was finally arrested for keeping a disorderly house and the patient was sent to this hospital by the police.

During her stay here the patient has been quiet and agreeable for the most part although occasionally quarreling with some of the other patients. She has been active and energetic, helps the nurses with the ward work and works quite efficiently in the mending room. She is very fond of going to all the hospital amusements and is never happier than when she can get a new dress or some article of jewelry to wear on these occasions. Mental age eight.

You see these are good natured, well conducted children, of course with the understanding that they are in a protected environment.

Case No. 15. This is a thirty-two-year-old white woman who has been in the hospital eleven years. Her father was alcoholic and brutal in habits, finally died of paralysis. Mother was alcoholic and died of gastric carcinoma. Four brothers were alcoholic and ne'er-do-wells. She had gonorrheal ophthalmia when born, was backward in walking and talking, and had smallpox at three and one-half years. Her mother was intoxicated a great part of the time and the child played in the streets.

Patient became intimate with dissolute companions and early became promiscuous sexually. Finally she became a prostitute, associating indiscriminately with white and black. She acquired both gonorrhea and syphilis, also used alcohol at times. She was sent to a hospital for operation for gall-stones and following operation was so unmanageable that she was sent here.

Here she has gotten along fairly well except for episodes when she is quite excitable, uses profane and obscene language and is unmanageable for several days. About a year ago her endocrins were investigated and it was found she had a deficiency of the thyroids and suprarenals. She has been treated for this, with some physical improvement. Mental age ten years.

Are we going to apply the usual moral standards to these children? Not many years ago these children would have been put in prison for such behavior. I thought we had gotten sufficiently advanced in

civilization not to have that sort of thing happen, but only a few weeks ago a fourteen-year-old boy was hung, presumably because he knew the difference between right and wrong. If he did he knew a good deal more than most people do. However, the judge and the jury were sure this fourteen-year-old boy could tell the difference between right and wrong. I remember seeing a judge after he had condemned to death a boy of that age and the judge told me, as if it were a perfectly simple statement, that the boy knew the difference between right and wrong and that was all there was of it. It seems astonishingly ignorant but we cannot be critical because people do not think about these things. Any of these children who were here will tell you these things were wrong. They do not know the difference between right and wrong but they have learned what people think is wrong and they repeat it by rote, just as one repeats the multiplication table. They have no real understanding of right and wrong. Philosophers have studied the question for years and years and have not solved it and I do not think we can. So at least in these cases we can see the futility and the absurdity of such tests. Such tests belong to forgotten and discarded concepts which we are still using only because there is nothing else to take their place.

Like the other girls you saw here this girl gets along very well except occasionally when she becomes excited, which is common among defectives who are defective in the emotional field and therefore occasionally have tantrums such as normal children have. On the whole, however, this girl is very well behaved and she has no special difficulties here.

Case No. 16. This patient was admitted to the hospital in 1919, when she was seventeen years old. She gave a history of having one brother who was insane. She attended school regularly from six to sixteen years of age, reaching the 7th grade. She was slow in her classes and was held back several grades. Her mother died when she was twelve and she then kept house for her father. She became sexually promiscuous at sixteen and claimed that her father impregnated her and that a child was born one year before admission. The child later died of influenza.

For several months before admission patient gave expression to the idea that she had seen ships in her room and that her dead mother surrounded by angels had been speaking to her. She also heard her sister's voice saying, "I am coming to you." When admitted to the hospital patient complained of being hypnotized and of being made to do things

she did not want to do. She imagined she saw men jumping out of corners to scare her.

Her history here has been a rather stormy one. She has had periods alternating between depressions and tantrums. She was often the source of much trouble on the wards. At times, however, she has been quiet and coöperative and she keeps her person fairly neat. In December, 1924, she eloped from the hospital. Her story is that she met a man who was a former employee at the hospital, at the gate as she went out; that he inveigled her to go automobile riding with him and that he seduced her. She was returned here in a day or so and two or three months later it was definitely determined that she was pregnant.

The patient's conduct continues to be quite variable and she is often negativistic and irritable. At times she has asserted that her food was poisoned and on several occasions she was the victim of pseudo-hysterical attacks. Though the latter have not reappeared she is still quite restless and unstable. Her age at present is twenty-five. Her mental age is ten.

The interesting thing about this patient is that she occasionally has definite psychotic symptoms. Remember that sometimes the feeble-minded have added to their feeble-mindedness psychotic symptomatology.

I will state briefly the record of a patient who did not come to the clinic.

Case No. 17. This is a twenty-six-year-old boy who has been in the hospital eleven years. Before coming here he showed a number of antisocial tendencies, mostly taking the form of stealing things. He was especially fond of stealing anything in which he could travel about, as a bicycle or horse and carriage.

During his eleven years in the hospital he has been quiet and agreeable to everyone about him and has shown remarkable ingenuity in eloping—having run away 14 or 15 times. Usually he goes to his relatives in Washington and they keep him out for a time, until he gets into some trouble. During his last elopement he stole an automobile, was arrested and indicted. On being returned to the hospital he was cared for in the Howard Hall or prison department. Mental age nine years.

This patient is a very agreeable sort of chap. He would not harm anybody, would not stab or shoot anyone or do anything of that sort, but he has certain dangerous tendencies in that he is a very proficient liar. He likes to lie and to build up grotesque structures. It amuses him to do it. It is a work of art so far as he is concerned. A few

years ago during some trouble a man was killed. It was difficult to find out just what had happened. This patient, however, came forward and said he knew all about it. He said he was out in the yard, heard a row and climbed up and looked through a window and saw everything. He described it in minute detail and could tell who was responsible for the death of the man. His whole story was a fabrication and there was not a word of truth in it. The window he claimed he climbed up and looked through was so located that he could not possibly have done so. The tale he told was calculated to indict a specific individual for murder. The net result of his yarn might have been the hanging of someone. That had no effect on him. He was interested in telling the story. He enjoyed for the moment being the center of interest, being in the limelight. He was having his fun. The fact that someone might be hanged as a result did not give him a moment's worry. So you see how dangerous he is unless you know him. If you know him you know what value to place on his stories.

There is nothing essentially vicious in these feeble-minded people. They are good natured, tractable, easily controlled in a protected environment. When they are not in a protected environment they drift into vicious conduct as a result of conditions they cannot do anything about, conditions created largely by other people, and are dangerous in an inactive and passive rather than an active way.

I will add this about the feeble-minded. I think it is a fair thing to say that the menial work of the world, the digging of the ditches, the clearing out of the sewers, the running of simple errands, the carrying of heavy burdens—all these things are done by the feeble-minded. I am reminded of what Mr. Darrow says occasionally about such people as you and I—that the reason we get an education is because we are too lazy to work. You and I do not want to do that kind of work. Someone has to do it. Who does it? Feeble-minded people. We have a patient here, a deaf mute. He is getting to be an old man now but when he was younger and more adventurous he used to run away. When he did he was picked up by a bunch of second story men who would assimilate him to their gang. They would plan a robbery and make this man the lookout and he would stay outside and give a signal if the police came in sight. If the police happened to come along this fellow would whistle and let them know it. Then they would immediately run away and leave him. He was deaf and dumb and if the police wanted to know anything

by the time they found it out the other fellows were a long way off. That was his history over and over.

We ought to be decent with these people and not criminalize and debase them. It is easy to get along with them. If given a little praise once in a while they will do these hopelessly stereotyped machine jobs that would drive us crazy, and they will do them with joy. Some of them are more or less dangerous looking and frighten people. One patient here was ugly looking, was as black as the ace of spades, and wore a bright scarlet hat that he made himself. He was defective and could not speak a single word, made only grunting sounds. Yet he would run a floor polisher all day and keep the floors well polished, and he was a perfectly good-natured chap. Another fellow here weighs over 200 pounds, can literally put a piano on his back and take it upstairs unaided. He is gigantic and ugly looking unless he is spoken to. If you speak to him his face broadens out in a smile and he will ask for a cigarette. Most of these people are of this type. They are doing our labor for us and if we can learn to treat them decently they will continue to do it. Many of these people, in doing their simple tasks, come much nearer functioning at 100 per cent efficiency as compared to their abilities than do most of the rest of us. We do not need to fill our reformatories and prisons with them. We need only to train them.

The problem of the feeble-minded is one of training. This has been called the Machine Age, and I think one of the answers to the Machine Age is the training of the feeble-minded. They can do these simple tasks and will do them with joy. They can be trained without much difficulty. The wonderful thing about the training of the feeble-minded is that however they are trained the training sticks for all time. Most of them are trained in the gutter, they learn their standards of conduct from that source and they become social menaces. When they are put in a proper training environment when young and taught good habits it is as difficult to eradicate the good habits as it is to correct bad habits when they have been acquired. The late Dr. Fernald, a leader in the movement for the care of the feeble-minded, once told me a story that illustrates the persistency of good habits trained into the feeble-minded, "stamped in" the psychologists call it. During the War he had an institution at Worcester, Massachusetts, that had a large farming district around it. All the boys in the surrounding district were being drafted or were going into the army and leaving the farms. The people who owned the

farms went to Dr. Fernald and appealed to him to help them by lending them boys he had trained on the farm. He said he would be very glad to do so and sent some of the boys from the institution to the farms. When he was downtown one day he met a farmer whom we will call John Smith. Dr. Fernald said, "John, how is that boy of mine doing on your farm?" John said, "He is doing fine. The only thing about him is that he *will* go to bed at 7 o'clock." The boy had been going to bed in the institution at 7 o'clock. That was his training and nothing could undo it. So if these people can be adequately and properly trained you see what can be done. Remember that intellectual defect or intellectual super-development has very little to do with what we call character, when we are speaking in terms of what means good citizenship. These feeble-minded people are capable of very good citizenship if properly trained, and in this environment they function with a high degree of efficiency.

From the social point of view the feeble-minded are in many respects the most important group we have to deal with. If we could change the feeling of the community toward them, get people to understand them, we would find that we have in the feeble-minded a very high percentage of assets, social assets. I have been convinced for a long time that they could be industrialized in our large industrial centers, with great profit to themselves and to the community at large, provided, of course, that they were properly supervised as they would be in an institution. When employers realize that perhaps feeble-minded people can do some work better than the intellectually normal, because they are interested in it and enjoy it more, perhaps they will be willing to undertake some such social scheme as that. In the meantime the feeble-minded are distributed through the community by the thousands, in all walks of life, unidentified, getting into all sorts of trouble.

EPILEPSY

The next group I will call your attention to is the epileptics. We started with the prison psychoses—the situation psychoses, then we dealt with the general paretics, then we took up the feeble-minded. Now we will take up the epileptics for a similar reason. In the first place, they have a difficulty that is quite obvious. They have fits, and people can see fits. That is a tangible, visible sort of thing. Then they present other characteristics that lend themselves to a

transition from the more or less obvious types of mental illness to the somewhat more subtle ones that require a little more thought, a little more preparation, a little more leading and direction in order to understand them.

Epilepsy, of course, is probably as old as man. So far as we know it goes back thousands of years, throughout historic times. It has been called by all sorts of names. It has been called the sacred disease, as so many other mental illnesses have been called in the past because they were thought to be special visitations of the Divinity. It has been called falling sickness, etc. The outward characteristic of epilepsy is generally supposed to be the convulsion. That is the most dramatic aspect of the disease picture. One who has ever seen an epileptic convulsion will probably never forget it. It is a horrible thing to look at and so it usually stamps itself into one's memory. The really most characteristic thing about epilepsy is probably not so much the convulsion as that which goes with the convulsion and is apt to be somewhat lost sight of, that is, the loss of consciousness. The epileptic during his convulsion is unconscious but he may have losses of consciousness without convulsion. So the loss of consciousness is probably the most outstanding feature of the attack, the most important one.

There are all kinds of epilepsies. We have late epilepsies, early epilepsies, organic epilepsies, functional epilepsies, toxic epilepsies, etc., etc. In other words, we may have convulsions from many, many causes. If we were to arrange the various types of convulsions we might begin with the hysterical convulsion, in which there is a not very profound unconsciousness, where the causative factors can usually be fairly easily uncovered, where the object of the convulsion can be understood, where its etiology is largely confined altogether within the psyche—in other words, the psychogenic convulsion; and we can follow along through more and more profound types of convulsions, through the convulsive stages of some obsessive neuroses, through the convulsions of Bratz and Leubuscher, seen in the so-called situation psychoses, down to the so-called organic reaction epilepsy accompanied by profound disturbances of consciousness. We may have convulsions that are not thought of as epilepsy, such as those of toxic type found in uremic poisoning, or convulsions due to new formations in the cranial cavity such as tumors where the convulsion is thought to be due to local irritation as a result of the tumor. So we have convulsions from various causes with all sorts

of explanations. From this mass we select a group to which the term epilepsy used to be applied, but even this group has become so complex and apparently contains such a multitude of varieties of things that the epileptologists—and we have specialists in epilepsy—not only speak of epilepsy *per se*, but they speak of “the epilepsies.” And even “the epilepsies” is hardly a very well defined group. We have in the epilepsies various types of conditions, for example, epileptic convulsions of the defective child, the feeble-minded, or the idiot, that comes to autopsy and we find a definitely sclerosed brain, or porencephalus, or the remains of an old meningeal birth hemorrhage, etc., etc. So we have finally come to the use of the term epilepsy as referring to a group that used to be called idiopathic epilepsy, which simply meant that here we have people who have convulsions and we do not know the cause of the convulsions, can not determine in the life of the individual or after death any cause, therefore it was called idiopathic. Now we call them the pure epilepsies. Even this group of epilepsies, however, is not very clear-cut, because we have begun to find a pathology even for them. In my *Outlines of Psychiatry* you will find the pathology that Professor Alzheimer worked out for the epileptic group, including this so-called idiopathic epilepsy, which the pathologist largely concentrates in the brain about the region of Ammon’s horn. More recently that region of concentration of the pathology has been enlarged to include the cerebellum.

Now why do people have convulsions, what is the meaning of the convulsion, and what are the symptoms of the disease besides the convulsion? In the first place I do not want you to think of epilepsy as a disease which has as its sole symptomatology the convulsion. The convulsion is merely a dramatic moment in the course of the disease epilepsy. Epilepsy has been very well described as a total life reaction. In other words, the epileptic is an epileptic through and through and not just because he has a convulsion, and the reason we say that is because the epileptic has a certain symptomatology between his convulsions. He has a pretty definite type of mental make-up, and the epileptologists, who live with the epileptics as we do with the psychotic patients, will tell you that they can make a diagnosis of epilepsy without knowing whether the individual ever had a convulsion or not, on the basis of his psychological make-up. That may be drawing the bow pretty long but one has a right to his suspicions along these lines. In general the epileptic might be described as a person of rather narrow mental horizon, rather egocentric in his

interests, essentially self-centered, generally somewhat irritable, particularly at certain periods that relate themselves to the convulsive outbreaks, and having other limiting types of personality traits of that general kind. The epileptic, as a rule, is not a very comfortable person to get along with. He is pretty rigid in his personality make-up. He has not very much give and take, and along with an outward appearance of being congenial and friendly there is under the surface a lot of criticism and discontent, with a tendency to find a lot of fault, to be irritable and cross, with occasionally violent outbreaks or tantrums or attacks of temper, etc. Now probably all of you can think of epileptics to whom that kind of description does not apply at all. We have epileptics with broad horizons of interest, who are intellectually very capable and efficient. So it becomes exceedingly difficult to compress the epileptic character into any rigid descriptive form, but in general the epileptic is the type of person I describe to you, with transitory attacks of ill humor and occasional convulsions that are usually ushered in by an increase or accentuation of all these personality traits which in the Nth degree of their development make the epileptic such a disagreeable person to get along with.

What shall we say of the convulsive attack itself? I do not know that we have any very good explanation of the convulsion. We have only known of it a few thousand years so we have not learned a great deal about it as yet, which means that in these departments of medicine, which I like to speak of as the great silent areas of medicine, in which we can not find our way about and in regard to which we know so little, we have to wait upon a lot of new information before the riddle can be solved, and that means a lot of new ways of thinking. Now we have some new ways of thinking about these problems, and we can apply them to epilepsy now and see what happens. In the first place, remember that I told you that the fundamental symptom of the disorder that stands out as being essentially characteristic of the attack is the unconsciousness. Now let us think of the symptoms of the disease in terms of their possible usefulness to the patient. We can always properly think in those terms for the purpose of seeing where it will take us, and what comes out of it. What is the use to the patient of unconsciousness, or is unconsciousness ever of any value? Our present thinking about it is that it is of value, and we think of it as being of so much value that we really have a phrase to describe what the epileptic does when he becomes unconscious. We

say when the epileptic becomes unconscious that he has taken a flight into unconsciousness. The word "flight" here implies a definite thing. It means that he has run away, he has run away from something, and he has sought sanctuary in unconsciousness. Now what possible thing can the epileptic run away from? Certainly it has to be something within himself. He runs away from something within himself.

I think you will remember that in the first lecture I tried to show you how psychologically we build up our ideals and how what we call a conflict within the individual, or an intrapsychic conflict, is a conflict as between the things that for some reason we want to do but which do not fit in with our ideals. Is it possible that the epileptic is pushed by a tremendous compulsion to do certain things which his ideals—which may not be very high but which he nevertheless has—make him resist doing, and that the compulsion is so great that he has to do them if he remains conscious and that therefore he has finally hit upon the solution, as it were, of becoming unconscious and helplessly incapacitated and thereby preventing himself from consummating the type of thing which he is afraid of. Speaking theoretically we can think of the epileptic as running away from something he might do. There comes to my mind the story of Macbeth, how he fought with himself before he was able to murder the king and how his wife urged him on, and the terrific attack of conscience he had after it was over. That is a very common type of story. Just magnify the crime several times and let it be much more hideous, perhaps, than murder, and let the resistance to it be much less than Macbeth's resistance and the ideals much higher, and you can see how the person would fade out into helplessness and unconsciousness and physical illness or would take any avenue of escape that would save him from doing such a thing. So one of the theories of epilepsy formulated by Dr. Stekel of Vienna, a brilliant writer, is that the epileptic is really escaping a criminal act. Suppose we elaborate that briefly and see where it leads. We know, in the first place, that epilepsy is very closely associated with criminal conduct, or crime. We know that the type of crime an epileptic commits is essentially brutal in the extreme. If someone were to describe to me a crime of murder in which after the individual had been murdered the body had been mutilated beyond recognition, slashed to pieces apparently in a blind fury, the first thing I would think of would be that the criminal in the case was probably an epileptic. Of course these

furious outbreaks occur in other people, but they are very characteristic of the epileptic. Then again we are beginning to pay some attention to the things the epileptic says. You know we have been dealing with mental disease for several thousand years without paying any attention to what people with mental disease said, just as if we were to try to deal now in the twentieth century with heart disease without paying any attention to the murmurs of the heart, or the area of cardiac dullness, or the disorders of circulation, edemas, etc.—the language of the heart. We have begun to pay attention to the language of the people who are ill, the language of the epileptics. In the period following a fit it will be disconnected, jumbled, a word here and a word there, fragments of sentences. You will be quite surprised to find that the communications we get in that way point to the fact that epileptics have all sorts of tendencies in them that might easily result in this kind of criminal behavior. As a result of that sort of observation Stekel has developed the theory that the epileptic is essentially a criminal and that unconsciousness is his escape from the necessity of committing an act he does not want to commit, that he makes himself helpless by his convulsion and his unconsciousness and so cannot commit it.

LECTURE VII

EPILEPSY (*Continued*)

I will say a few more words about the main symptomatology of epilepsy before bringing in some patients for you to see. The dramatic symptom of epilepsy is, of course, the convulsion. The mental state during convulsive seizures is rather interesting. There has been some experimental work done in that connection in recent years and the mental state associated with the convulsion has been thought of in this way. The attitude which the epileptic takes during the convulsive seizure, with the marked overemphasis in the contraction of the flexors, the adductors and the pronators, together with the loss of consciousness, has suggested the attitude we have become more or less familiar with in recent years and which has been called the attitude of decerebrate rigidity, which, as you know, comes about practically as the result, in the experimental animal, of cutting off the upper cerebral centers entirely and leaving the animal controlled only by the lower centers and the medullary centers. In harmony with that analogy I have suggested that we might term the state of the epileptic during the convulsion a state of functional decerebration. In other words, the control of the upper centers, which are largely inhibitory in function, has been removed, not as the result of a surgical operation or an organic lesion but as a result of a functional disturbance of which the fit is the outward manifestation.

The fit itself has certain interesting peculiarities. It is in a considerable proportion of cases preceded by certain psychological symptoms which collectively are known as the aura. The aura is very apt to be sensory in quality. Certain sensations are experienced by the individual who is about to have a convulsion. These sensations differ in different individuals. They are very apt to be sensations that have their beginnings in the epigastric region and then there is a moving upward of this sensory disturbance until it reaches the head, as it were, and then the individual becomes unconscious. There are various other types of aura, some of the well known types being the sensation of smell or taste which immediately precedes the attack,

and because the localization of these sensations is in the uncinate region these are known as uncinate fits.

The first portion of the convulsion is one of tonic contraction of the voluntary musculature. This tonic contraction lasts only a short length of time, usually thirty seconds or such a matter. That is followed by a clonic phase in which the convulsions become clonic in nature and then finally cease. The unconsciousness probably comes about as a result of a rapid diminution in size, as it were, of the field of consciousness. We can speak of the field of consciousness much as we speak of the field of vision. We know that in normal states this field of consciousness may be contracted to pin-point dimensions. For example, in conditions of extreme physical pain consciousness is so contracted, so that the individual is conscious only of the pain and the location of the pain, and sensations from other sources are impossible of reception. One might dilate upon that contraction of the field of consciousness to a considerable extent, but presumably that is what happens until the field becomes zero and the individual becomes entirely unconscious. So the first stage of the convulsion is one of disintegration or destruction of consciousness, with a tonic stage of convulsive phenomena. This tonic spasm is presumed to be sub-cortical in origin. It is believed that the cortex, because it has what the physiologists call a latent period, that is, if it is stimulated there is a perceptible period of time before contraction occurs, that its phenomena are phasic in character, and hence the succeeding clonic stage of the convulsion is attributed to the cortex. So we have first a stage of disintegration of the conscious phenomena and of the neuromuscular phenomena so far as their advantage to the individual is concerned, followed by a clonic stage which may be conceived to be the beginning of a redistribution of normal muscle tonus, followed by the postepileptic coma or semi-coma during which the individual is partly if not completely out of touch with his surroundings and during the latter portion of which he will give expression to certain automatic types of response on the mental side. We find such things as fragmentary phrases, which may be interpreted if we know enough about the personality of the individual. We find such phenomena as baby talk indulged in by the patient. As to motor phenomena, we find such regressive phenomena as abdominal breathing, sucking motions of the mouth and drooling, and such automatic activities as getting up and fumbling about in a confused way and perhaps beginning to undress. This gradually emerges into a more complete con-

sciousness and the individual comes out of the attack, with perhaps certain residuals—a feeling of exhaustion and lameness in the muscles, with to a certain extent in many cases, an actual partial palsy of the muscles, which have been very tremendously involved in the actual convulsive seizure, the so-called postepileptic paralytic phenomena.

We perhaps make a mistake if we think about this whole thing as being entirely motor. I have already indicated to you that a part of the attack, namely the aura, is sensory in character, and it is very possible that we may have epileptic seizures which are of entirely sensory content. We may perhaps have epileptic seizures which are motor but which do not primarily or essentially involve the voluntary musculature. We may have visceral motor phenomena, vomiting, etc., phenomena which indicate that the viscera at the level of the vegetative nervous system are involved. In other words, we not only have the classical epileptic attack, which is the ordinary, well known motor fit, but we have the possibility of a great many other kinds of attacks, such as attacks at the vegetative level, sensory attacks and sometimes attacks exclusively psychological in type. Then we have what are known as epileptic equivalents—attacks of dizziness, attacks of short losses of consciousness without convulsions, attacks of mental states such as great anger which may result in what is known as the epileptic furor during which the individual is very destructive and perhaps murderous and which pass off perhaps without a fit. So we have an exceedingly complex picture and you can readily understand how the epileptologist has been dissatisfied with the single designation of "epilepsy" and has spoken of this group as comprising "the epilepsies." There are a great many things that may happen to an epileptic and which can only be diagnosed as epilepsy when we know the whole picture, the whole pattern of the personality, and realize that these various attacks are substitute phenomena for the more definite, outstanding convulsive seizure with which we are more familiar.

Today I will bring before you a group of epileptics of various kinds, representing the various types of these phenomena, to let you see what they look like, and will read their histories briefly. You will remember that I am always reverting to the fact that we have to consider the organism as a whole, and when we consider the organism as a whole we must not forget that the mind is a part of that organism. So when we are dealing with the symptomatology of epilepsy we have

to think of the various physical symptoms and also of the various mental symptoms.

Case No. 18. This man was for thirteen years in our Howard Hall Department because of certain dangerous tendencies. He is forty-six and has been in the hospital sixteen years. He is impulsive and homicidal in tendencies. At one time he served in the army and during a war he received a bullet wound in the region of the right eye. He claims that his epilepsy is due to this bullet wound and that his first fit occurred about two years after the injury.

During his stay in the hospital he has had frequent epileptic seizures but has always been inclined to minimize them, sometimes referring to them as "spells of indigestion." He has been very difficult to get along with. On one occasion shortly after admission he became violent immediately following a convulsion, overpowered the attendant on the ward, secured his keys and left the hospital. Patient was apprehended when he had gone only a short distance and returned to the hospital. From that time up to a few years ago he was cared for in the Howard Hall building. It has been necessary always to handle him carefully as he easily becomes irritated. He constantly complains about the way the other patients and the attendants treat him. He has many other complaints and if these are not given sympathetic attention at once, becomes abusive and threatening. He has been in frequent fights with other patients even aside from his epileptic seizures, as he is quite paranoid in general attitude. He frequently demands discharge, saying he has a wife and a lot of household furniture that is deteriorating because of his absence. At times when talking about this he becomes very emotional, works himself into a sort of frenzy, the tears roll down his face and he demands that he be discharged at once.

On one occasion the patient attempted suicide by hanging, and he has frequently threatened to do this. A few years ago he was transferred from Howard Hall to the general wards as he had not shown dangerous tendencies for some time, and since then he has not been any worse than the usual epileptic although he has been in numerous fights.

Attempts have been made to treat the patient with luminal but his condition is usually worse after a short course of this drug.

The sella turcica is quite narrowed above by the approach of the clinoids. The opening in the radiograph is only about one-sixteenth of an inch. The posterior clinoids show some appearance of erosion.

We have here an explosive type of individual, the epilepsy presumably following a gunshot wound. It is interesting to indulge in a little theorizing and to wonder whether the gunshot wound is in

itself a sufficient cause of the epilepsy. We find in the books, if we wish to take what they say, that a great many people have gunshot wounds in the head and do not develop epilepsy and that therefore one who does has an epileptogenic make-up, in other words, that with certain injuries certain people develop epilepsy while others do not.

[The patient was asked if he knew what the lecturer had said about him and he replied, "It was all right." He stated in reply to questions that he had had no rows lately, that he had had fights because people had talked roughly to him, that he did not think the trouble was that he was easily irritated or got mad quickly, that the trouble was always with the other fellow.]

That is not an unusual sort of picture.

Case No. 19. Since his admission to the hospital in 1915 this patient has been very troublesome following his convulsive seizures although between these he is quite a good ward worker and is very coöperative. He frequently injures himself severely in his seizures, often falling on his face. During one of his spells he attempted to crawl out of the ward by means of a steampipe and burned his hands rather severely. Since February, 1923, the patient has been taking luminal, with some improvement in the character of his seizures. It was thought at one time that he might have a tumor in the occipital region but radiography of the skull does not show anything of the sort. The pituitary fossa seems normal.

The patient had had two decompression operations before he was admitted to the hospital.

One thing that the surgeon has been inclined to do for a long time has been to cut out epilepsy, and that has been a rather difficult proposition. A good many epileptics have been operated on. There are types of epilepsy where an operation is beneficent, brain tumor cases for example, injuries where there are local manifestations such as depressed fractures, etc. In the type called idiopathic epilepsy, the type about the causes of which we do not know very much and with respect to which we hide behind the term idiopathic, I am not aware that various skull operations have accomplished very much. Epilepsy is a chronic malady, and if you operate on any individual with a chronic disease he will get better and it does not make very much difference what sort of operation you perform. The trouble is that the improvement does not last. The improvement can be understood as being in part due to psychological causes. The patient wants to get well. He wants to think he is better and he is therefore in a state

of mind that makes it very easy for him to think he is better after an operation, so after an operation he will always tell you he is better. The epileptic normally has that state of mind. Almost any epileptic, if you will ask him about himself, will tell you he is getting better, and he will offer various evidence to prove that that is an actual fact. He is always getting better and no matter what you do for him it has a beneficent effect. All sorts of things have been done, from the very severe intracranial operations to operations in which just a skin wound was made in the abdomen, making the patient think he had had a laparotomy, sewing it up, etc. Then of course the general physical depression following operation is very conducive to discouraging the fits. The epileptic when seriously ill does not have convulsions. It would be very unusual to find an epileptic suffering from a severe illness, who was at the peak of an illness like typhoid fever or who had a severe pneumonia, who would have convulsions. Epileptics do not have convulsions at those times. That is apparently one of the devices of Dame Nature, again, which help to protect the individual.

However, these devices are not as remote as that always. They are sometimes quite psychological. If you will talk to epileptics enough to get a vision of the attack and how it comes about you will very frequently find that the attack comes at certain times which are opportune, something like the hysterical attack, not quite as obviously opportune as the hysterical attack but to a certain extent opportune like the hysterical attack. When I first came here and these new buildings were under construction I wondered whether it might not be a good plan, in the building where we were going to house our epileptics, to construct a ramp instead of a stairway, on the theory that the epileptic might fall downstairs and get badly hurt but that on a gradually inclined plane he would not be apt to be hurt so badly. I conferred with the superintendent of a big epileptic colony, who was at that time a national authority on epilepsy, and he said there would be no use in that because epileptics by and large did not fall downstairs. So we did not do it, and I think it is an unusual thing to find the epileptic falling downstairs. It sometimes happens; there are no rules without exceptions. There are extreme reactions in all conditions, but to a certain extent the epileptic has a choice as to where he falls. If, for example, he has an aura which has any appreciable length he knows what it means and immediately seeks some kind of safety. So there is a certain opportunism about the

epileptic attack. The epileptic attack is also associated with certain psychogenic features. The epileptic can be precipitated into an attack by an irritating psychological situation that might have been avoided if he had been treated a little differently.

Case No. 20. This patient has one of the types of epileptic equivalent. He was twenty-eight in 1924 when he came to the hospital, is about thirty-two now. He came to the attention of the public in the spring of 1924, when he ran amuck with an ax. A newspaper clipping with regard to that equivalent runs something like this: "Shell Shocked Man Runs Amuck. Town Terrorized by Crazy Ex-soldier Who Batters Doors with Ax."

On admission here in June, 1924, he was quiet and orderly, said he had never had any spells until he was discharged from the army in 1919. Said he was injured in action in France, having been hit over the occipital region by a hand grenade.

In addition to equivalents this patient has convulsions, which at present occur about once a month. They are very severe and he has no warning of them. He says he goes to bed feeling fine, gets up feeling well and during the day a severe seizure comes on quite suddenly. Sometimes, he says, he merely feels badly when he wakes up and wants to lie in bed for a day. He does not remember the episode when he was excited and ran wild with an ax.

[The patient was asked whether he remembered the incident when he ran amuck with the ax and he replied, "No more than what they tell me."]

That illustrates that whether it is an epileptic convulsion or an epileptic equivalent it is followed by a pretty complete amnesia, an organic amnesia, incapability of recall. That is one of the things about which there has been so much discussion in medico-legal cases, and again we have no absolute rule. Usually, however, the person who has had an epileptic seizure or an epileptic equivalent does not remember what happened during the attack. He wakes up to find himself in a hospital and only knows what people tell him about it. That is the case here, although at the time he was exceedingly dangerous and at the time it must be conceived that he had some kind of consciousness even though it might not have been a very highly developed type of consciousness, because his actions were coördinated and he appeared to have a rather definite objective that he was able to carry out over a considerable period. Then he had a fit, and the convulsion destroyed the whole possibility of recall. Memory is a

rather complicated thing. It depends on the strength of impression and the frequency of impression, and it is also dependent on the possibility of recall, and recent impressions are impressions that are very superficial, are not easily recalled and are more or less easily destroyed so that they can not be recalled. So when the epileptic equivalent is followed by convulsion, as it quite frequently is, it is the rule that there should be no recall of what happened during it, although we can not by that same token presume that during the time of these various automatic activities there was no consciousness. In other words, presumably the activity of this man during this period was not truly automatic, although this kind of activity is referred to as epileptic automatism. The use of the word automatism is probably due to the fact that the patient does not recall the activity and it was therefore presumed to have occurred during a period when there was no clear consciousness. Probably it occurred when consciousness was not clear but not when consciousness was absent. Therefore it was not a true automatism but we have no way of recalling to the mind of the patient what did happen.

Case No. 21. This is a twenty-four-year-old colored boy who has been in the hospital seven years, having been taken into custody by the police because he tried to cut a man with a pen-knife. He has been having convulsive seizures since he was a small boy and at present has them rather frequently. For a day or two before and sometimes for several days after his seizures he is quite confused, and sometimes is actively hallucinated, especially in the visual field. He will say that he sees angels flying about him and has beautiful visions of all sorts. He has heard witches' voices talking to him. He says he has seen Saints come down from Heaven and people in the sky who look like his own people, and they say to him that he will be just the same on land or on sea. He is quite irritable and at times assaults people without provocation. On several occasions following seizures he has been seen searching the ward, saying he was looking for a weapon to kill one of the nurses. On account of his dangerous tendencies he is being cared for in the Howard Hall building.

You will remember that I told you in the last lecture the type of things the epileptic is apt to do. These patients illustrate what I told you, how frequently the activity is a serious attack on the person of someone else, how frequently it is criminalistic in its characteristics.

For a day or two before and sometimes for several days after seizures this patient is quite confused, and sometimes is actively hal-

lucinated, especially in the visual field. That is a very characteristic history in many epileptics. The person is mentally very much disturbed either before the attack or after the attack, presenting either the pre-epileptic or the post-epileptic symptomatology. Quite frequently the disturbance in the psychological field precedes the attack and following the attack that disturbance rapidly disappears. Those who work on the wards with these patients can often tell a few hours or a few days beforehand that an attack is impending. During this period when an attack is impending the patient is very apt to be an extremely irritable person and very difficult to get along with. Then the attack comes and the personality of the individual changes and he becomes agreeable and comparatively easy to get along with. It is as if the attack discharged all this spleen, cleared the atmosphere, as if all this difficulty that had been accumulating over a period of time were discharged at the time of the convulsion and then we found a very different type of individual.

The patient sees angels flying about him and has beautiful visions of all sorts. That, again, is very characteristic, because the epileptic not infrequently has a very shallow type of religiosity as part of his symptomatology. It is quite characteristic of people who suffer from chronic illness that inasmuch as they can not get help from any human source they should appeal to the divine source of all help for some kind of assistance. So when the disease is as serious and as crippling as epilepsy it is not strange that we should find the patient developing this tendency to lean on a God-head for some sort of release; and it is not infrequent that the epileptic thinks this sort of thing, and when he is hallucinated during the period of confusion preceding or following an attack it is not strange that his hallucinations should fall into this general pattern.

[The patient was asked if he knew what the lecturer had said about him and he replied that he had been "recommended for the nurses." He said he had been very liberal and had been a good boy.]

I do not know this boy very well, but one is impressed with the poverty of his replies and with a certain discrepancy between the content of what he says and his general appearance. One would not be inclined to be very sure of his benevolent tendencies while listening to what he says.

Case No. 22. This is a twenty-two-year-old colored boy who has been in the hospital since he was eight. His father had epileptic seizures

as a child but these were said to have ceased when he reached adult life. The father died of tuberculosis. One sister is a patient in this hospital suffering from epilepsy. The mother was pregnant eight times, four children were still-born and two died immediately after birth.

Patient began to have epileptic seizures at six. These at first showed themselves in a sudden rigidity of the muscles and rolling of the eyes. They increased in severity as he grew older but decreased in frequency so that there was an interval of six months when he had no convulsions. He attended school for a couple of years but did not get along well. On account of his tendency to roam the streets and because of the lack of adequate home supervision he was sent to a hospital and thence here.

During the fourteen years he has been in this hospital the patient has had frequent convulsive seizures. At times he will not have them for several weeks, then will have 20 or 30 in the next week or two. He is rather mischievous but is not vicious. At the age of thirteen a Binet-Simon test was done and showed that he had a mental age of four and one-half years.

We have here an epilepsy associated with feeble-mindedness, not an uncommon association. Of course we have to take into consideration the fact that the epileptic does not have much chance to acquire a great deal along the way, but this boy is definitely feeble-minded and as such became a problem which required institutionalizing.

This patient will not have any convulsions for some time, then he will have a whole series together. The thing the epileptic dies from most frequently, more frequently than anything else, is epilepsy. Epilepsy is frequently not thought of as a fatal disease, but the epileptic dies of epilepsy in about 30 per cent or 40 per cent of the cases. He dies of epilepsy usually in one of two ways. He may have a fit in which he seriously injures himself and dies as a result—it is not uncommon for an epileptic to seriously burn himself, he may have a fit in a kitchen and fall on the stove and be seriously burned before anybody rescues him—or he may have what is known as status epilepticus. He may have a series of convulsions. We have two kinds of series of convulsions. If in the series a convulsion occurs and completes itself and then there is an interval between that convulsion and the next one, we speak of serial attacks. If the convulsive seizures overlap so that there is no interval and one convulsion begins before the last one has ceased then we have what is known as status epilepticus. Status epilepticus is the typical way in which the

epileptic dies, and he dies largely from exhaustion. When I tell you that an individual with status epilepticus will have, say, three hundred convulsions in a day, if you have ever seen an epileptic convulsion you will have a faint idea what that means translated in terms of exhaustion. It must mean a perfectly stupendous exhaustion of that individual, and he dies of that exhaustion. Apparently, I think, exhaustion proceeds from the more superficial and higher centers until it involves the deeper and more vital centers, and however it may proceed, death is due to exhaustion. He may also die as the result of status epilepticus or as the result of serial attacks because during a long period of unconsciousness he may acquire an aspiration pneumonia, which is not an uncommon terminus for an epileptic if not properly cared for. So one of the important therapeutic things to bear in mind when a patient is having a convulsion is to see that the mouth is cleansed as far as possible. Quite frequently a patient bites his tongue during a convulsion. During the clonic phase the jaws come together with a pressure of about 200 pounds, or something of that sort, and if the tongue is between the teeth it is bitten and the mouth is filled with blood, which if aspirated forms a culture medium in the lungs. If there is any food in the mouth, as frequently there is, the food may be aspirated. So it is very important when you are called in immediately following an epileptic convulsion to see that the mouth is perfectly free from presenting this kind of danger to the individual.

One of the things I did many years ago when I was on the ward service was to give bromides to a group of epileptics, and then take another group of epileptics to whom no bromides were given. Knowing the epileptics and how many fits they ought to have, because after observing epileptics for some time we know how many fits to expect in a given time, I found that in the patients to whom the bromides were given convulsions were prevented over a considerable period of time but that unfortunately, having been prevented from having convulsions over a considerable period they then proceeded to have them all in a bunch, and of course the bunching of the attacks constitutes one of the serious dangers to the life of the patient. Therefore I stopped giving bromides to our epileptics. We are now giving luminal to epileptics, with little result. If epilepsy were as simple a thing as the theory of giving bromides indicates it would be good therapy to give bromides, but it is a little difficult to see how giving a patient 30 or 40 or 50 grains of bromide of potassium three times a

day is going to materially improve conditions in a total life reaction type of disease.

Case No. 23. This is a sixty-three-year-old colored man who has been in the hospital twenty-two years. His father was said to have been alcoholic. Patient's early history was normal so far as known and he worked at various laboring jobs from early adolescence. His first convulsions were said to have begun at the age of thirty-two, but this information is unreliable.

On admission to this hospital he was found to have an extremely depressed fracture of the right malar bone. This was said to be due to a blow received in a fight about two years after the onset of his convulsions.

The patient has from 2 to 15 convulsions a month. He spends most of his time in his room and is irritable when disturbed in any way. He complains constantly about his clothing, his food, detention here, etc. He quarrels with every new patient who comes on the ward and suspects other patients of being put there to spy on him. He is hallucinated at times, saying that he hears a boy's voice talking to him.

Examination of the sella turcica showed the pituitary fossa to be practically closed above.

Case No. 24. This is a twenty-nine-year-old white boy admitted to the hospital twelve years ago at seventeen, with a history of having been in a school for the feeble-minded. It was said that he had had epileptic attacks for eight or nine years, attacks occurring about once a month. The attacks began at that time with a feeling of stupidity and weakness, followed by contracture of the muscles of the entire body. He claimed that he never lost consciousness but that following the attacks he felt stupid, drowsy and usually slept for a while.

Mental examination at this hospital showed no hallucinations or delusions but indicated feeble-mindedness. During his stay here he has had typical epileptic seizures averaging about one or two a month as a rule, but sometimes rising to fifteen a month. He has had ground parole a good part of the time and gets along fairly well. Luminal has been prescribed for the patient without success. He does a little work of a menial nature but otherwise does not employ himself in any way.

The diagnosis in this case is epileptic deterioration. We can envisage epileptic deterioration this way. If Stekel's theory of epilepsy has any truth in it then it means that when the epileptic is confronted by a reality situation about which he can do nothing and that reality situation calls upon him to do something which offends

his ideals and which, if he carried it out, would constitute a criminalistic act of which he in his good senses does not approve, and if his flight into unconsciousness is an escape from the necessity of doing this sort of thing, then we can see that the epileptic is constantly compromising with reality, constantly running away from it, constantly making a concession to his lesser self and becoming unconscious rather than fighting the situation out and conquering it. Therefore we may say that the epileptic deterioration, from the psychological point of view, is the result of a frequent and continuous tendency on the part of the individual to make these concessions to his lesser self. I will say something about the organic side a little later.

[The patient was asked to talk to the class and did so.] I asked this patient to talk to you because I think he presents, not very typically but sufficiently, a symptom of epilepsy to which I want to call your attention, the so-called epileptic voice sign. I do not want you to notice particularly the hesitation as he just had an attack and is still suffering from the inability to collect and adequately mobilize himself which follows an attack. I want to call your attention to the monotony of his voice. If an orator should talk to you as this patient has talked you would soon all be asleep, although the monotony is not as marked in this case as it is in some cases. The normal voice, reflecting as it does the emotional state of the speaker, and the emotional state of the speaker having a vibrant quality which shifts in its level almost with every word and even with parts of words, the voice is said normally to present a certain melody and that melody can be plotted. If the voice is spoken into a receiving apparatus which is attached on the other end to a tambour which has a writing needle attached to it against which a revolving smoked disc is adjusted, and we note the different inflections of the voice translated into the up-and-down movements of the needle, you will find that the melody of the voice is translated into a curve that is interrupted by all sorts of minor curves, showing the upward and downward play of the intonation in what we call the melody of the voice. Now the epileptic would show a very much more flattened out curve. It would be very much more nearly a straight line. The epileptic tends to talk to you on a monotonous level with no up and down and no change, whether the matter is interesting or emotionally full of content or not. It is a flat curve. It is the monotony of the voice, the lack of melody, that is known as the epileptic voice sign.

Just a few words about the pathology of epilepsy. I have already indicated to you that the pathology was largely resident in the Ammon's horn region. There has perhaps in recent years been added to the Ammon's horn region the cerebellum, both of them significant in many ways although we do not know just how to hitch them up with the attack. There is a certain amount of actual pathology that is discoverable in the epileptic brain, and that pathology is indicative of a destructive process. I am citing now the findings of Professor Spielmeyer, one of the outstanding neuropathologists of Europe, and you can take them for what they are worth. His theory of the epileptic convulsion—I have given you, you will remember, a theory formulated at the psychological and social level—he gives a theory formulated at the anatomical and physiological level, but before we can understand epilepsy or anything else human we have to get theories that are sufficiently inclusive to comprise all these levels. Dr. Spielmeyer's theory is this: that the onset of the attack is associated with an ischemia, that is, an anemia in certain parts of the brain due to vascular spasm. What the vascular spasm is due to I do not think he suggests, that we do not know, but epileptic brains have been seen during convulsions in patients who had had decompression operations or injuries that removed large portions of the bone, and just preceding the attack the superficial cortical area blanches, becomes relatively anemic, and that is presumed to be due to spasm of the blood vessels and the blood vessel spasm is supposed to be due to some sort of neural control. I confess I do not know how that comes about because, if you remember, the cortical vessels have been supposed not to have vasomotor nerves. Perhaps some have. However, that is Spielmeyer's theory. He equates the findings of degeneration in the brain substance with the findings that are known to result from shutting off the blood supply and therefore he thinks that this repeated ischemia of certain levels of the brain leads finally to a degeneration of the neural elements involved, and that that degeneration at least is characteristic pathologically of the epileptic brain. Whether it has anything etiologically to do with it is another thing. The areas that are involved are fundamentally the Ammon's horn and the cerebellum. You can take that theory for what it is worth.

Presumably we have a long way yet to go before we will know much about epilepsy but all these little lights and suggestions along the path are interesting and will ultimately have to be woven into the final picture.

LECTURE VIII

EPILEPSY (*Continued*)

Before leaving the subject of epilepsy I will add one or two things. You will remember that when I began these lectures I told you that I was not going to try to teach psychiatry to you in twelve lectures, that I did not expect you to learn a great deal about psychiatry, that the principal thing I wanted to do was to give you a point of view. In harmony with that intention I repeatedly refer to different concepts that I want you to carry away with you when you leave this course of lectures. One is the concept of the organism-as-a-whole. Another is the concept of the different levels at which we find disturbances—the laboratory level, the physiological level, the psychological level, the sociological level. Another one, which I will mention now, is what we call the extraneural pathology of mental disease.

For a long time the pathologists thought that the only place to look for a pathology of mental disease that would be explanatory of mental disease was in the brain. That, of course, is what we would naturally expect, because it seems to be a pretty definitely assured fact that the cerebral cortex does mediate in some way the functions of the mind. Without entering into a metaphysical discussion, there is a connection there that warranted the view of pathologists that the pathology of mental disease was in the cerebral cortex. So years ago that is where the pathologists hunted, that is where they are still hunting, and there grew up a pathology of mental disease—not so much a pathology as a mythology, so to speak—based upon a theory of cortical functions. We have had to change our ways of thinking about this sort of thing as we have come to assimilate the concept of the organism-as-a-whole, realizing that mental functions are total reactions and that the cortex is only the physical substratum through which these total reactions manifest themselves. We realize that when we are dealing with total reactions we must be dealing with the whole organism, and that any serious disturbance of any part of the organism will find its reflection in some way in the final total reaction.

So we see that we must necessarily think that extraneural pathology has some bearing on the explanation of mental disease.

This extraneural pathology point of view is an important one because it is a part of the point of view of the organism-as-a-whole. If you will think the thing through you will see that you can not have serious cardiac disease, serious renal disease, serious disease of any viscus which is essential to life, without having its reflection in the psyche in some way. Just how we can hitch this up in detail, trace out all the pathways and explanations, is another story. So in epilepsy while it is true that we do find a good deal of cerebral pathology, the pathologists have been working at epilepsy for a long time and the blood chemists have been working at it for a long time, yet here we have a disease that medicine has known for over two thousand years and still we do not know much about it. When we are confronted with a situation like that it is worth while to say to ourselves that perhaps there is something wrong with our method of attack on the problem or with our point of view. So now I should say that most assuredly we have to tackle such a problem as epilepsy from these new points of view which envisage the entire organism.

It is a very interesting thing that we find at this hospital certain changes in the pancreas in a certain proportion of our epileptics, and they are in the nature of hypertrophy in the Islands of Langerhans. If you will bear in mind the Islands of Langerhans and the function of insulin in the making available of glycogen for the nutrition of the muscles, and the fact that the epileptic in his convulsive seizures needs an enormous amount of muscular energy, uses up a tremendous amount of it, you can see in a general way how there might be some relation between the pancreatic functions and his necessities as the epileptic presents them to his organismic pattern. He calls upon these various sources within him to supply him with the means of conducting these convulsive attacks, and they are put to it, as it were, to develop the energy for all this display. So we find in the pancreas a condition similar to that in the thyroid, with which we are very much more familiar. We find a hypertrophy, increase in size, greater amount of functioning, in order to meet certain demands in excess of what would ordinarily be found. The surgeon's idea, of course, is to cut it out, but we want to be pretty sure before cutting a thing out that it is not purely a compensatory mechanism and that if we cut it out we are not destroying a compensation. That is what sometimes happens when a surgeon cuts things out—he destroys a compensation

that is needed. However, I am especially anxious to have you get the point of view here of the organismal response, the point of view of the meaning of the organism-as-a-whole in the explanation of mental disease from the point of view of pathology which is extraneural. I do not mean to discard the neural side by any means, but remember that you have to bring into the picture the extraneural pathology.

MANIC-DEPRESSIVE PSYCHOSES

We will now take up the manic-depressive psychoses and I will first show you two patients who belong in that group.

Case No. 25. This is a white man, thirty-four years old, admitted to the hospital about a month ago from a state hospital. He had had several previous admissions to hospitals.

On admission here he was quite excited, noisy, yelled loudly, moved restlessly about his room, frequently interfered with other patients. During the month he has been here he has shown marked psychomotor activity, has been pleasant and agreeable for the most part and occasionally facetious but at times has become angered upon slight provocation. At times on being questioned he uses vulgar and profane language, then suddenly checks himself and apologizes profusely.

A partial stenographic report of his production is as follows: "I brought all the dead back—I am wonderfully happy—I give thanks to the Jews—(here the examiner looks at his watch and the patient says 'time,' then goes on) I am the Father and the Son—I am the best orator—fifty million dollars, rough estimate."

The patient has shown a tendency to misidentification and rhyming.

There are two or three things that are perfectly obvious in the conduct of this patient. One is the pressure of activity. This man is under a certain amount of pressure of activity which makes it impossible for him to keep quiet. He has to move, or talk, or scrap, or do something—he is busy all the time. The Germans have a word for this—"Vielgeschäftigkeit," meaning much busyness, pressure of activity. Then you notice how hoarse the patient is. That is due to the fact that he is constantly talking, does not rest at all. He is good-natured, smiling, laughing, euphoric. So we have here increased psychomotor activity, euphoria, *Vielgeschäftigkeit*. There is also some flight of ideas but that is not very noticeable in this case and is not sufficient to lead to incoherence. His sentences are still reasonably coherent but if there were a little more excitement they would

be so jumbled that he would be incoherent to some extent. His face is suffused and he has all the outward indications of excitement of the manic variety. The principal important fact from a diagnostic point of view is that the history shows that the patient has evidently had several previous attacks. One very important diagnostic criterion is the history of previous attacks.

Case No. 26. The patient is a thirty-three-year-old white woman admitted to the hospital about four years ago with the information that she had attempted to kill herself on several occasions.

The history shows that at about eighteen she was depressed for six months, then passed into an excited period that lasted nine months, followed by recovery. At twenty-eight she became excited, remained so for about nine months, then had a depression that lasted until about eight or nine months ago. Since then she has shown a great deal of improvement and at present she has ground parole and is fairly cheerful.

Past history: Mother committed suicide when patient was five weeks old and patient was brought up by aunts and uncles. When about five years old she was told by a playmate that she was only an adopted child and she developed a feeling of inferiority. When reciting at school she would tremble and she felt that she could not compete with other children. She graduated from high school and began to teach school. There she was obsessed by the old idea of failure. She had an attack of diphtheria and when she recovered and went back to teaching everything seemed to go wrong. She got the idea she could not do anything properly, became greatly depressed and attempted to throw herself into the river. She was taken south for a few weeks in an effort to cheer her up. On this trip she attempted suicide with laudanum. Soon she began to feel better and to take an interest in things. She went around a great deal and was quite talkative. That condition lasted through the following winter and she then returned to a normal condition. At that time she was twenty. In March, 1923, she again became elated, was restless, gave away her clothes and money, packed her trunk at a minute's notice and went to Baltimore. At a hotel there she created such a disturbance that it was necessary to take her to a hospital. She took down all the curtains and moved the furniture out of her room. She remained in a hospital until January, 1924, when she was discharged as recovered. She returned to Washington but was rather disappointed because she could not get a position. She went home quite depressed and remained there until brought to this hospital five days later. While at home she attempted suicide by gas.

On admission here she was quite depressed, sat about the ward all day and spoke of starving herself to death. Shortly after admission she

said she had swallowed some pins but X-ray did not reveal any. During the first year here she had to be tube-fed occasionally because she refused to eat. She talked very little but on one occasion said she did not believe the doctors here were really doctors and that the whole situation was a hoax. It was difficult to get her to go out walking or to move for any purpose. She objected to bathing and to removing her clothing.

During the latter part of 1925 and 1926 the patient showed a little improvement. She began to take more care of her person and answered questions, although somewhat meagerly. She was given sewing to do in the Occupational Class and did it very well. However, without special warning she attempted to hang herself. She said she felt that she did not belong anywhere and that she was of no use to anybody and she did not see why she should go on living. Following this attempt she improved and during the last month or so she has been normal or possibly a trifle over active. She has been quite active, talks a great deal about her affairs and those of others on the ward. She writes a good many letters, then asks the physician to censor them, saying, "When I am manic I write awful things." Some extracts from a recent letter are significant: "Please say that in Mrs. ———— present state of arrested elation, a trip such as we planned to P Building might prove to be the one stunt that would throw me off my pins. After all I am not manic now simply because of a tremendous effort of will. The easiest thing I could do right this minute would be to take a trip into the realms of unreality. . . . After all, you know damn well that the only thing that's ever been wrong with me is too much brain in my head for the people I had to associate with and so they called me crazy. They did the same thing to Buddha and Christ and Saul of Tarsus and Napoleon and Julius Caesar and Beethoven and Charles Lamb and Shelley and Lord Byron and every perfect creature that God ever created."

It is significant that after she came out of her depression this patient said that while depressed she watched daily for a chance to kill herself but the nurses were too careful for her, except one night when a new nurse left the clothes room door open for a few minutes and she then attempted suicide. She believes now that she can never die because she has tried all sorts of ways and failed. She says that since May she has eaten the glass out of three compacts but it had no effect on her.

This young lady has been depressed and at present she is a little euphoric. The main thing I want you to see is the general picture—she is smiling and good-natured, rather euphoric in appearance. I want you to realize that you can have all that psychological symp-

tomatology in very mild form without any of the motor activity that the preceding patient showed.

The two patients I have shown you to-day belong in the category of the manic-depressive psychoses, and in order that you may appreciate the symptoms in these two patients I will tell you a little of the history of the development of the manic-depressive psychosis idea.

We are indebted to Professor Kraepelin for that idea and also for the elaboration of the idea of dementia precox. Professor Kraepelin was a professor at Heidelberg when he worked out these two great concepts, the manic-depressive and dementia precox groups of psychoses, the essentially benign and the essentially malign types. From there he went to Munich. The old psychiatrists had only four or five or six groups in which they placed all their mental cases. They had the manias and the melancholias and the dementias, then the feeble-minded, and a hundred years ago Bayle gave the first full account of general paresis, then slowly there evolved the idea of paranoia. A pretty small group—the most complex thing in the world is the mind and yet there were only six kinds of mental disorder. The ingenuity of medical men was below par in those days. The old psychiatrist had a great many people who suffered from excitement and a great many people who suffered from depressions, cases which he called manias and melancholias. He discovered that many of those with excitements subsequently had depressions, and that many of those with depressions subsequently had excitements. Many of those with excitements got well and had other attacks, and the same thing happened with the depressions. So it was a rather mixed-up picture, and Professor Kraepelin tried to straighten it out. He started his work of straightening out this great mass of confusion on a theory that is a great deal like the theory of the biologists. If the biologists want to know anything about an animal they study its life history. They had the necessity of that emphasized very early by having many new species described which when they observed them over a long period they discovered were only embryonic types of species already known. No one, for instance, would have suspected the relation between the butterfly and the caterpillar unless their life histories had been studied. They do not look alike nor act alike. One would have to study the life history and see one change into the other to realize that there was any relationship between them. So Professor Kraepelin started to study the life history of the psychoses. Previ-

ously the psychoses had been studied in cross-section. A patient was admitted to a hospital and his symptomatology at that moment was inquired into, was described and written down, and in accordance with the symptomatology then observed a diagnosis was made. You can understand how disturbing it was to the diagnostic tendencies of the young phychiatrist to have a patient who came to the hospital depressed develop an excitement. That was more or less against the rule, as it were. So Professor Kraepelin started out with a study of the life history of the psychoses. We go further than that to-day—we study the whole life history of the patient from beginning to end. Professor Kraepelin got as far as the life history of the psychosis. His formula was to study the course and the outcome of the disorder, and he divided the psychoses into two groups in accordance with the outcome. Those that got well were benign, and those that did not get well were malign.

The benign cases belong in this group where we have all this medley of excitements and depressions. Professor Kraepelin discovered, a good deal as one would discover a caterpillar becoming a butterfly, that if he watched certain types of depressions long enough they developed excitements, and *vice versa*. All of the cases did not do this. Some people go on having depressions all their lives; some people tend to have excitements all their lives. However, he was able to define a certain kind of excitement and a certain kind of depression that belong together, so that a patient who had one of these, whichever it was, tended sooner or later in his lifetime to have the other. These excitements and depressions are predominantly emotional affairs, or to use a term that the Germans like much better and that we have taken over and that has a little broader connotation than emotion, they are “affect” psychoses. The outstanding symptom in the affect group of psychoses is the fluctuation of the affect, so that we have the affect going up or down. As it goes up we have our excitements and as it goes down we have our depressions.

This bringing together of all these types of cases that up to that time were disparate and disconnected was a very valuable and very helpful work. It enabled us to tell what was going to happen to patients in a very much more definite way. We know pretty definitely that these patients that I have shown here to-day will get well in spite of anything we do or do not do. The tendency of these cases is to get well. Some of them do not get well. Some of them commit

suicide, for example. The tendency, however, is for them to get well. So the diagnosis is of very great importance.

However, there are many things we can not tell about these patients. We do not know much about the order in which these depressions and excitements are going to take place. If we plot out the entire history of a psychosis extending over thirty or forty years and indicate the different psychotic features by different signs in that picture, we will find that there is a great lack of regularity in it. Once in a while we find a patient who has excitements and depressions alternating, or recurrent attacks of one sort or another, with wonderful regularity every six months or once a year, but such cases are the exceptions. Usually we find that the picture of the psychosis after being plotted out for a number of years presents a helter skelter symptomatology. The only thing in it that perhaps is predictable is that we have periods that are free from psychotic symptoms. The patient swings back to normal, in the course of events, from time to time. So we have these pictures of alternating or recurrent excitements and depressions interspersed with periods of health.

We have a few important symptoms to go on in making a diagnosis. We have the euphoria of the excitement and the self-accusatory attitude of the depression; we have the increased motility of the excitement and the decreased motility of the depression; we have the flight of ideas of the excitement and we have the interference with and the difficulty of thinking in the depression. The best criterion we have for making a diagnosis, however, is the recurrence of attacks. Almost everyone who gets into an institution like this with a frank manic-depressive attack will give a history of previous attacks. It is quite unusual to find that there is not such a history, but you have to find it. The patient does not always give it to you spontaneously. The relatives do not give it to you spontaneously, and often they do not know it. Frequently the previous attacks have been very mild. We call the mild attacks the cyclothymias. They are so mild that they are mistaken for something else. If we were able to make a survey of the patients who go to the offices of the internists we would find a certain number of cyclothymics who at the time of their depressions develop vague digestive disorders, cardiac distress, and one thing or another, and are taken to see doctors. The doctor can not find anything. He tries to relieve the trouble. The patient ultimately gets well. The doctor likes to think he has cured the patient and the patient likes to think he had something that was curable. He likes to

think the trouble was physical, does not want to think it was mental. So here is a sort of quiet conspiracy, as it were, between the doctor and the patient and the family and everyone else to cover up this real mental disorder. It is classified as some kind of physical disorder and the patient gets well; and that makes a much prettier picture than would a mental trouble where a patient gets well but with the same regularity that he gets well he gets sick again so that getting well has its drawbacks.

When we get the longitudinal picture of a psychosis like this we are in the same position that we were with epilepsy. If a patient should come into your office vomiting you would be pretty smart if you made a diagnosis right off of epilepsy; but it is possible that if you had a life history of this individual and saw him having all sorts of convulsions and epileptic equivalents, psychic epilepsy, marked sensory disturbances, a tendency to certain kinds of visceral spasms with no organic visceral disease—if you had the life history and could see how an occasional attack of vomiting would fit into the concept of a visceral epilepsy you might think of this attack as perhaps an attack of an epileptic equivalent at the visceral level, although that would be rather difficult anyway before you had more well-defined symptoms, such as an attack of dizziness perhaps followed by a momentary loss of consciousness, or a slight attack of irritability lasting over two or three hours and disappearing suddenly without any reason, or a sudden attack of somnolence in which the patient perhaps falls asleep in the midst of an interesting task although he had had a good night's sleep, etc. Then you might have a picture of epilepsy. So with manic-depressive cases, when you realize that you are dealing here again with a total life reaction type of affair, that its outstanding symptoms are easy to recognize and very dramatic but that it has all sorts of minor manifestations,—as soon as you get your longitudinal section you begin to see how these minor manifestations work into the picture and you realize that you do not have to have a person who is actually suicidal and mute and tube fed in order to make a diagnosis of depression. I have in mind a patient who when euphoric and excited was a writer and wrote with the greatest freedom page after page without the slightest effort, would write letters of 15 or 20 pages, many every day. His activities moved along as if the whole business were greased. He would awake in the morning and suddenly we would know he was in a depression. To write a letter was impossible. He could not raise his hand or make

a line. He would walk downtown and go through the ordinary motions of living, but writing a letter was an impossible task. Without a longitudinal section, realizing that you could have this type of symptom in all degrees, you could never say that in such an instance we have a cyclothymic attack of mild degree.

What is the significance of the manic-depressive reaction? I will not spend much time upon that because it is one of the most difficult problems in psychiatry and we do not know much about it. I will merely say that the Germans have a word which describes the manic-depressive reaction very briefly. The manic-depressive patient when manic is into everything, is active, euphoric, does not take time to sleep, and sometimes does not take time to eat and is consequently emaciated. The manic-depressive patient when depressed is a very sad person who does not talk much and is very apt to be suicidal. The suicidal element here is very important. For example, the young woman I showed you tells us now that when depressed she was constantly watching for an opportunity to kill herself. No one would suspect that now. When a person really wants to commit suicide we will be pretty smart if we prevent it. A great many suicidal efforts are merely gestures, fortunately, and have little possibility of becoming anything further than that. But the really suicidal patient usually succeeds, and we find that the really suicidal patients include many of the manic-depressives during a depressive attack. So we find a patient manic at one time and depressed at another, and the Germans speak of the manic-depressive psychosis as a *Sisyphus-Arbeit*. It is like the work of Sisyphus, as if the patient during a manic attack spent all his time trying to roll a stone to the top of a mountain and just at the top the stone slipped, and rolled back, then he goes into the depths of a depression and has to start all over again. I have a suspicion also that the manic attack is a defense method, that the patient has a sore spot in his make-up that he would like to keep people away from and he succeeds somewhat by this type of activity. I will not discuss the mechanism of it much further than that, except to say that it is very profound. The mechanism of the manic-depressive attack reaches down into what the psychoanalysts call the pre-genital level, that is, down to a period of two or three years old.

Professor Freud has developed a theory for a certain type of suicide that occurs in these people that is worth paying some attention to and which is very helpful. He would distinguish between grief and melancholia. We have not discussed melancholia yet but I will

later show you a few cases of what is known as involution melancholia. Involution melancholia, or depression in the involution period, in the fourth, fifth and sixth decades, is very closely allied to the manic-depressive psychosis if it is not really a form of it. Professor Freud makes a distinction between grief and melancholia. Grief is the normal reaction of a person on the loss of a love object. Someone whom the person loves dies and then all of this love, or whatever you want to call it—various psychologists call it by different names, but whatever it is you attach to a person when you are fond of that person, affection, love, interest, respect, all those various things—no longer has any attachment. The person is dead and these have nowhere to go and one feels the loss because there is no attachment, and the person only gets over the grief when he is able to find some new object to attach these psychological energies to. Now in melancholia the story is somewhat different. You will remember that I tried to tell you very briefly the way in which we build up within ourselves our ideals through a process we call identification, by identifying ourselves with the people we love, and we build up these ideals within ourselves by taking in, by a process of introjection, these beloved personalities and erecting them within our own. When we do this of course we always run certain risks. We take in personalities which have certain undesirable traits and those undesirable traits become part of ourselves. Melancholia very frequently supervenes when a beloved person has failed in some way to measure up to what we thought he ought to measure up to, to the estimate we have made of him. In that sense a certain portion of ourselves has failed and the disappointment may be so great that we want to destroy that aspect of ourselves, we are so thoroughly disappointed. However, unfortunately, that particular aspect of ourselves cannot be destroyed without destroying ourselves, and that is the mechanism of suicide. I will give you an illustration which I think will make it fairly clear to you. I had a patient some years ago, from the ordinary point of view a very good looking young woman. She had been seduced. From her point of view her most beautiful feature was her breasts. She was a very full-busted young woman. She thought her breasts were the aspect of her that had attracted men, and therefore that it was because of her beautiful breasts that the man was attracted to her who ultimately seduced her. Her reaction in her depression was to attempt to destroy her breasts. She clawed and scratched and tried to disfigure them. That is understandable. One of the charac-

teristics of this whole manic-depressive reaction is that we are dealing with emotional reactions that are more or less understandable. People pluck out their eyes because they have seen things that were offensive to them. One patient goes into a shop and cuts off his hand in a machine that was meant to chop chewing tobacco. So you see how profoundly such Biblical commands as "If thy right hand offend thee, cut it off" and "If thy right eye offend thee, pluck it out" are grounded in the racial consciousness. We get psychotic people who do this sort of thing. Sometimes a patient will pluck out his eye. One patient who came here literally bit off her tongue. I have no doubt, without having asked her and without knowing, that her tongue had offended her by saying things she did not approve of, so she bit it off. So the personality we have built up within us is an integral part of ourselves and can only be destroyed by destroying ourselves—suicide.

I will say just a word about the extraneural pathology of the manic-depressive group. There is not very much of any other kind of pathology. We have no cortical pathology of manic-depressive attacks that amounts to anything so we are interested in extraneural pathology and we cannot get any concept of it at all unless we have the concept of the organism as a whole. We have certain types of disease, or certain diseases in certain people, that are benign in outcome, and the same disease in other people is much more serious. For instance, a disease like tuberculosis—you have probably seen people with tuberculosis of the lungs die in six months. It spreads like wildfire and nothing stops it. You have probably known other people who had tuberculosis forty years. We can express the difference in these people by saying that we have in the one case the possibility of developing certain kinds of defenses, or rather let us call them compensations, and in the other case we have not. We are perfectly familiar with somatic compensations. A man loses his legs and he learns to walk around on a short pair of crutches with his arms swinging his body. His arms develop hugely, to the size of the average person's legs. That is compensation. If there is a valvular lesion of the heart the heart immediately hypertrophies, the balance in circulation is reestablished—compensation. A person has curvature of the spine in one direction and curvature in the opposite direction develops—compensation. Those are all illustrations of the compensatory capacity of the somatic make-up. That is true also of the psyche. The manic-depressive group belongs to the compensatory pattern of the psychoses. We do not find in the manic-depressive

patient any dementia. He never deteriorates from his manic-depressive psychosis. He never loses anything. You do not find under the microscope any evidence of permanent disintegration of the nervous system. We have continual fluctuations between excitement and depression, a continuous effort at striking the balance. The patient does not succeed, but the effort is always going on, the effort at compensation, the attempt to reach an equilibrium. When we get to paranoia we will see the compensatory mechanism on the mental side very much more clearly shown. The manic-depressive group belongs to the compensatory type of psychosis. It is interesting and it appears to be true that the individual who is capable of somatic compensation is also capable of psychological compensation, and *vice versa*. So our manic-depressive individual does not die because he develops a disease that he cannot compensate for. He does not die of tuberculosis. The manic-depressive individual dies usually of cardiovascular disease, cancer, or something of that sort. On the tissue side the things that kill him are essentially new growths, compensatory efforts. The symptomatology is a compensatory effort. The mental symptomatology has to be looked at as is the somatic pathology. Fever is not a 100 per cent liability. It is an asset—we are curing our paretics with fever. That is one of the things fever is for, to cure, or at least it is an indication that the body is trying to overcome a fault. It is the same with the psychosis. As with scar tissue so it is with mental symptomatology such as delusions or what not—they are all indications of efforts at getting well. So we see the manic-depressive individual fighting throughout his life, making recurrent efforts that express themselves in excitements and recurrent periods of depression, but going on from beginning to end without losing anything that belongs to his original mental make-up, without deteriorating.

On the treatment side the main thing to look out for in depressive cases, I warn you again, is suicide. I will say again that people usually commit suicide if they intend to 100 per cent. One patient committed suicide with a nurse sitting at the foot of the bed watching her. The ingenuity of such patients is very great. They have nothing else to do and no other interest and if they mean to do it they will usually succeed.

There is one other matter as to treatment that I will mention. It is a very interesting treatment devised within the past three or four years. I think we ought to speak of it though not with any commendation especially. Our results with it have not been good.

It is the bromide treatment. I do not think especially well of it. Bromide treatment is not much good in epilepsy. Someone in Germany began to use it in depressed cases and found it valuable, and it has been tried by Dr. Wright, at Utica, New York, on a number of cases with excellent results, not only in the profound depressions of the manic-depressive variety but in depressions of other varieties. Bromide, of course, is used very extensively. Frequently one of the principal things to do is to get doctors to stop giving bromides. A lot of symptoms subside when bromides are stopped. But this new method of giving bromides is very different from any other. It is called the large dose method, beginning with doses of 100 grains and running up as high as 300 grains a day. I do not advise you to try this treatment unless you have the patient in a hospital and are careful to read up very carefully on the subject so as to know just what you are doing. The theory, apparently, as far as there is any theory, was suggested by the old treatment of depressions by opium. In the old days depressions were treated by opium. A depression can be relieved by opium but after the depression is relieved you have an opium habitué to cure, which is perhaps worse than the depression. With bromide also you get a relief of the depression. I had a very dear friend, a physician, who ultimately killed himself in a depression. He had a serious depression for three years and he finally went to Utica to go on bromide treatment. In a very short time I received from him a long letter that had no similarity to his letters of the preceding months. He was euphoric, was simply delighted at the results of the bromide treatment. How bromide does the trick I do not know, unless it in some way dulls the receptor apparatus and gives the individual much less material from the outer world to deal with so that it reduces his work enormously and therefore enables him to get along very much better with what little ability he has to make adjustments. The interesting thing is that these enormous doses of bromides act very differently from small doses. You would think you would at once have bromidism. There is not the same tendency to bromidism. I have no idea why. I just give you this in passing because it is one of the new developments in the therapeutics of depressions and is worth looking into, but I am not very enthusiastic about it, as you see. My friend had a wonderful come-back but shortly afterward killed himself.

LECTURE IX

MANIC-DEPRESSIVE PSYCHOSES (*Continued*)

In the last lecture I told you about the alternating attacks of excitement and depression and called your attention to the fact that when we have a longitudinal section of the patient's life we see that the life in a good many instances is pretty thoroughly occupied by these attacks of depression and excitement and that these attacks do not necessarily come at any regular intervals, that while we had patients who did have attacks that came at regular intervals the great mass of the manic-depressive patients have attacks coming at all sorts of times. That can be understood by realizing that the precipitating factor of the attack is frequently exogenous, that is, it is outside of the personality, something in the situation has something to do with precipitating an attack.

I have here a translation of Professor Kraepelin's book on Manic-Depressive Insanity, in one chapter of which there are diagrams illustrating the frequency of individual forms of attacks. In the diagrams red represents mania, pink hypomania or attacks in which the patient is mildly maniacal, deep blue represents deep depression and light blue represents light depression. Then there are cross-hatchings of blue over pink representing angry mania or maniacal stupor. When the cross-hatchings of pink are over the blue it represents depression with excitement or depression with irritability. So in general the reds are excitements and the blues are depressions, and the cross-hatchings mean the interpolation of other symptoms, such as irritability and excitement, which are ordinarily not in harmony with the general mood of depression or excitement. The space in the diagrams is divided into months. When a blue streak goes across the complete graph it means a whole year of depression, shorter streaks meaning shorter periods of depression. One of the depressions is complicated by symptoms of irritability, and as irritability belongs more particularly to the manic symptomatology rather than to the depressive symptomatology we have here an indication of what we call a mixed state. The existence of mixed states is of course one of the very definite proofs of the organic relationship of the

depressions and excitements. If depressions and excitements are related then we can understand how one can be translated into the other and how we may have periods of mixed symptomatologies, symptoms of both states occurring at the same time. One diagram shows a profound depression lasting over several years, certain portions of it being complicated by symptoms of irritability, so that we have depression with irritability. In the pink diagrams are shown various types of recurrent mania, recurrent excitements. One diagram illustrates the case of a patient who had on the whole excitements all his life, but there is a period of a couple of weeks when he had a depression at the beginning of an excitement that lasted four years. Here is a case with a series of attacks of excitements, with a couple of depressions lasting two or three months each occurring without any particular regularity. Here is a diagram of short excitements of a week or two spotted all over the life of the patient. Then there is a diagram of a person whose whole life is made up of a mood that is above the base line, in other words he is hypomanic all the time and a great deal of the time he is hypomanic plus certain other symptoms, anger, stuporous symptoms, depression—showing a mixture again of the depressive symptomatology. There is shown by these colors every mixture of symptoms, excitement and depression, and not only excitement and depression as emotional factors but everything else that goes with excitement or depression.

I want to call your attention in this lecture to the depressions, more particularly the manic-depressive depressions. There are many different kinds of depressions but we are now interested primarily in the manic-depressive type.

Case No. 27. This is a forty-five-year-old white woman admitted to the hospital about five months ago because of an agitation that had lasted two months during which she had stated that she was going to die from cancer of the uterus, although her physicians assured her that there was no growth whatever there. She tried to give away all her personal belongings on account of her impending ailment.

The family history showed that the patient's father was a spiritualist. One sister was weakminded. One brother was a successful inventor.

The patient had had severe chorea in childhood. One sister thinks the patient was always peculiar mentally and said she was a woman of unusual attainments but so egotistic that she could never keep friends. About ten years ago she had a "nervous breakdown," about which no details could be elicited. About two years ago patient was in an automobile accident,

was severely shocked and following that "went all to pieces mentally." She was taken to a sanatorium where she was depressed, believed she had carcinoma and thought she was going to die. She recovered but in February of 1927 following discovery that she was pregnant she again became greatly agitated and was depressed during her whole pregnancy. Following the puerperium she was taken home but as she was still depressed she was brought to this hospital. On admission here she was retarded, stream of talk was very meager and she said she had done wrong, worse than anyone else, although she would not tell what it was.

During her stay in the hospital she has been depressed. When some workmen were building a road in front of the building in which she was she said she believed the building materials were being prepared to torture her. She said she did not wish to see her family or to accept anything from them. She said she loved her husband better than anyone in the world but that she did not want to see him because she was such a disgrace to him and was unworthy of him.

I call your attention to the general appearance of this patient. You see how different a depressed patient looks from an excited patient. You will notice the attitude of the patient—the forward flexion of the body, the head more or less on the breast, legs flexed. There is a tendency in these depressions for the patients to assume more or less the foetal attitude.

The history states that about ten years ago the patient had a nervous breakdown. Many of the so-called "nervous breakdowns" are mild manic-depressive attacks—cyclothymic episodes. The delusion of sin is a very characteristic delusion in these depressions.

Case No. 28. This patient is a white woman of about forty who has been in the hospital a little over a year, this being her sixth admission to this hospital. Her whole life history has been a succession of manic attacks preceded by depressions. When fifteen she had a depressed attack, then an excitement in which she seemed dangerous and she was placed in a state hospital for several weeks. In 1906 at eighteen she was admitted here and after seven months was discharged as recovered from manic-depressive psychosis, manic type. She was here again in 1912 and 1915 and 1918, staying several months each time and being discharged as recovered. In 1921 she was here only a month when she was discharged by court. She came here again in October, 1923, and was discharged in February, 1924. The diagnosis was manic phase of manic-depressive psychosis each time.

At the time of her present admission in October, 1926, she was quite

noisy, laughing and talking and trying to kiss the policeman who brought her in. She talked in an extravagant manner about being a grass widow and being in love with various members of the staff. Within a few hours after admission she became so excited and disturbed that it was necessary to care for her in a private room.

Family history showed that maternal grandfather had three attacks of paralysis. Maternal uncle was said to have been eccentric. Father had several attacks of cerebral hemorrhage and finally died of them. One brother was alcoholic and later attempted suicide.

Personal history shows that patient was an eight months' baby and had spells in early infancy and childhood in which she lost consciousness for a few minutes. She was always emotionally unstable, even before her first definite attack.

Several months after admission she quieted down, was moved to an open ward, made a good adjustment, and in January, 1927, went home on visit. She got along fairly well until several weeks ago, when she became depressed and it was necessary to return her to the hospital. At present she sits quietly in a corner with her head supported on her hands. She never smiles, she speaks in a low voice and very slowly, is frequently mute and tube-fed.

Here we have again the diagnostic importance of a history of repeated attacks. This young woman was fifteen years of age when she had her first depression. It is quite characteristic that we find the depression occurring first at the adolescent period. The recurrent attacks in this case make a picture that looks like one of the diagrams in Professor Kraepelin's book.

Within a few hours after the patient's admission here in 1926 she became so excited and disturbed that it was necessary to care for her in a private room. We do not lock our patients up but we put excited patients in rooms by themselves. Very often excited patients want to be in rooms by themselves. The excitement is distressing to the patients. They have this great pressure of activity, keep talking, moving and paying attention to everything that is happening in the environment. If they are put in rooms by themselves a lot of the stimuli from the environment are cut off and for the first time they have a chance to calm down and get a little relief from the necessity the environment imposes on them when excited to be constantly reacting to it.

The history that patient's father had attacks of cerebral hemorrhage is very interesting. You will remember that I told you that manic-depressive psychosis belongs to the compensatory type of

psychoses. We believe that where there is capacity for somatic compensations that going along with that there is ability for psychological compensations. With ability for compensatory psychological processes we get as a result, when these compensations are pushed to their limit, what we call blow-outs in the vascular system, cardiac decompensation, cerebral hemorrhage, etc., and outside of the vascular system malignant growths, tumor formations, excessive productivity that might conceivably at least be due to pressure as a result of the effort at compensation.

The history in this case shows that the patient had spells in early infancy and childhood in which she lost consciousness for a few minutes, and that she was always emotionally unstable. The meeting of the Association for Research in Nervous and Mental Disease in 1930 will be given up to a consideration of the manic-depressive psychoses. I am preparing the program for that meeting and in doing so I have been writing to people who are working with children to ascertain whether they have any idea what the conditions are that show up in childhood to suggest that the child when an adult may have a manic-depressive psychosis, and I find that no one knows anything about that so far. So I call your attention to the fact that this patient as a child was always emotionally unstable. That is a general term, of course. She had attacks of unconsciousness. Whether that means anything in the present psychosis I do not know. We know very little of the childhood of the future manic-depressive except what we find out about it from the adult patient in working back and of course that is a very late date to enable us to do anything about it prophylactically. What we would like to do is to detect it in the child so as to be able to do something about it then.

In depressions of manic-depressive and involution types we have a tendency for the manifestation of symptoms about the oral zone. So we have muteness, which is an oral negativistic manifestation, and refusal of food, another negativistic manifestation in the region of the oral zone. When patients attempt suicide they not infrequently so do by swallowing poison, which is again a manifestation in the region of the oral zone.

Case No. 29. This is a fifty-six-year-old white woman who was admitted to the hospital one year ago, this being her second admission.

Family history negative except that the mother had asthma and later cardiovascular-renal disease from which she died.

Personal history negative so far as obtainable. In 1903, at thirty-one, patient had a depression, was retarded, and was sent to this hospital, where she remained for four months. She was then discharged as recovered. In 1926 she began to have similar symptoms and she attempted suicide by jumping in the river.

On admission to this hospital she was quite agitated, moaning and groaning and saying that she had committed a serious mistake, although she refused to say what it was. She has continued to be agitated a good part of the time she has been here. At times for a day or two she appears to be fairly well, but again begins to cry and groan. Most of the time she sits around immobile, with a fixed expression, her eyes downcast, and refuses to answer questions.

These people are quite uncommunicative and quite lacking in ability for coöperation, so that they are quite difficult to deal with in some ways.

Case No. 30. Patient is a sixty-eight-year-old white man who has been in the hospital eight years, having been sent here because of depression and ideas that people were trying to poison him. He had also had an attack in 1905 when forty-five, another in 1916 at fifty-six, but had recovered.

Family history showed that one sister was a patient in this hospital for ten years.

Patient's first attack began at forty-five, when he was depressed, felt that he was going to be killed and was unable to do any work. He was in a sanatorium several months and was then discharged as recovered. He got along fairly well during the next ten or eleven years, but was never able to make a living again. He worked about the house, took care of chickens, the garden, etc. At the age of fifty-six he began to complain of pains in various parts of his body, especially the abdomen, and was sent to a number of doctors, including a gastroenterologist. He was somewhat depressed at that time but recovered and was fairly well for four years. In 1920 he again began to complain of pains in his abdomen, said he was neglected by his own family, and threatened to take his life. He was then admitted to this hospital, where he has remained since.

The patient has continued to be depressed during the eight years he has been here and he has given expression to statements such as, "Life is not worth living. I am being tortured and might as well do away with myself." He says that his tortures are punishments of God. Says he does not eat anything but bread, although the attendants state that he eats very heartily.

This is this patient's third attack. He has been sick now for a long time and has come to the conclusion that life is not worth living. I assure you that when one is in a profound depression life is not worth living. You will notice his general expression, attitude and make-up. I just asked him if he was depressed about anything in particular and he said no, that he is just depressed. There is not anything in particular to hitch it to. That is quite characteristic. Then the patient says he has pains all over his body. I told you that a good many depressions get into the hands of the internist because of somatic complaints. Of course I would not discount the possibility that some such patients do have somatic troubles. Some do, but the whole thing is psychological in a good many cases and when the depression lifts the pains, etc., go along with it. Quite frequently a patient gives the type of answer this patient does—that he is not depressed about anything particularly, is simply depressed. With reference to anxiety the Germans have an expression which has analogies with this situation. They speak of free floating anxiety, that is, an anxiety that is not born of anything but is floating about and is capable of attaching to anything. So people who are frightened and anxious will be frightened at anything that comes along. These people are depressed in somewhat the same way. The depression is a condition that does not have any explanation in their minds. They sometimes develop delusional explanations in regard to it, but delusions, and particularly hallucinations, are not a part of the typical picture of the manic-depressive psychosis, especially in the manic state. We do find delusions in the depressive state, as we might in a case like this, to account for the depression. Then we find that the delusions characteristically take the form of ideas of sinfulness or unworthiness. The patient thinks he is very wicked or unworthy. Perhaps he can give some good reasons but usually the reasons are not very good, that is, they do not sound good to us. Usually it is some trivial thing he has done some time in his life upon which he has centered his attention and which he thinks is the unworthy thing. One patient, for example, went into a profound depression following a telephone conversation which indicated that her daughter had been behaving very badly. Despite the fact that she afterwards found out that the telephone conversation did not refer to her daughter at all but had reference to someone else that made no difference, the depression had started. That is the outward appearance of the situation. Of course it has its deeper and much more significant roots, of which I will speak later.

The movements in depression as a rule are slow. We not only have muteness and refusal of food in depressions but also refusal to make any movements at all. These patients characteristically when profoundly depressed will lie in bed for weeks or months and have to be cared for like children and fed.

Case No. 31. This is a fifty-three-year-old white woman who has been in the hospital nearly five years.

Family history showed that her sister had three attacks of mental disorder and finally committed suicide. Another sister is beginning to have mental trouble. Patient's father was said to have been eccentric. One brother was a chronic alcoholic and another brother a periodic alcoholic.

Personal history showed nothing especially unusual in her early development except that she was always inclined to worry easily and unnecessarily. She has always been hypochondriacal, and she received treatment from many doctors for stomach trouble and intestinal trouble. One doctor said she had ulcer of the stomach and another doctor operated and shortened the ligaments of the uterus.

Mental trouble seems to have begun in October 1922, when patient began talking about being responsible for all the trouble in the world. She said she was the most immoral person living.

On admission to the hospital she was quite restless, agitated, anxious and depressed, crying and wringing her hands continually, saying she had committed the unpardonable sin and there was no forgiveness for her. She continued in this depressed state for several years, then began to show some improvement and was given occupational therapy. At present she is being cared for in an open ward and gets along fairly well. She is still depressed, however, and wanders up and down the hall, wringing her hands. Occasionally she catches hold of the physician and begs for a few minutes private conversation. When granted this privilege she can say nothing except, "I don't know—I don't know what is the matter—I don't know."

This patient has been profoundly depressed. She has been here about four years. She is very much better now but you can see from her general appearance that she is still quite a little depressed. When she first came here she would usually rush up to me if I went through the ward, grab me and plead with me to do something. It was never very clear what it was all about but something had to be done to save the day and I had to do it, and I always had difficulty in getting away from her. Now she does not do that. She is very much better but she is still quite doubtful about things and quite worried and appre-

hensive about the future. She now occupies herself for a considerable portion of the day in the occupational department. When she first came here she could not possibly have done that.

Case No. 32. This is a fifty-five-year-old white man admitted to the hospital nearly three years ago because of depression, refusal to eat and ideas that he was going to be poisoned.

In 1923 patient developed a number of paranoid ideas, believing that his fellow employees were persecuting him in various petty ways. He frequently complained to the police about this. In July 1924 he wandered away from home to elude his enemies. Three weeks later he was located by his wife and brought home. He then worked until January 1925, when he was laid off on account of a strike. Two weeks later he again left home. He was found by relatives and put in a hospital, whence he was transferred here.

On admission here the patient was retarded. His manner was uneasy. He groaned and sighed frequently and was self-accusatory. He said he felt terrible, that his flesh was burning up.

Since here the patient has been mildly depressed. He has a number of somato-psychic delusions. Although he has gained 60 pounds and has improved greatly physically he still insists that his food does him no good and that his entire gastrointestinal tract is no good, that he is full of bugs. He says there is no blood in his body and that he would be better off dead, that he is full of snakes and lice.

I presented this case because I wanted to show you some of the nuances in depressions. The thing that stands out in this patient's condition is his somato-psychic delusions, which would ordinarily be called hypochondriacal. Somato-psychic refers to the representation of the soma in the psyche. He insists that his food does him no good, that his entire gastrointestinal tract is no good, that he is full of bugs, that there is no blood in his body, etc. That sort of thing is a very characteristic type of somato-psychic ideas. We have auto-psychic delusions if the delusions refer to the self, and allo-psychic delusions if the delusions refer to the environment. In this case we have a depression with delusions of a somato-psychic character. As I have told you, delusions occur in depressions but they are not essential, are not characteristic. We often find them in depressions but quite characteristically they are absent in excitements. Hallucinations do not belong in manic-depressive psychoses at all. When we find hallucinations we begin to think we have a malignant condition. Hallucinations indicate the beginning of splitting, which I will talk

of in discussing precox. There are many things in the manic-depressive that look like they might be hallucinations—the patient is so busy with the environment that it seems as if he might have hallucinations.

INVOLUTION MELANCHOLIA

Case No. 33. Patient was admitted to the hospital in 1922 at fifty-four. His father died of a paralytic stroke and his mother of tuberculosis.

Patient had the usual diseases of childhood and completed grammar school without difficulty. He got along well with his classmates and his teachers. Most of his work has been along commercial lines. He has been in rather poor health all his life and has been forced to change positions on that account. He gives this as an excuse for not marrying. He has always been of a seclusive and self-absorbed disposition. At forty-five he had his first love affair but the object of his love soon married another man and to this the patient ascribes his depression. He began to use veronal and thought of suicide.

The patient came to this hospital voluntarily. His condition has remained essentially the same. He goes about the ward in a dejected manner and is obviously melancholy; is so preoccupied with his agitations and worries at present that he does not engage in conversation.

This case shows a depression that belongs in a later period of life, involution depression, which is somewhat different in its characteristics from the manic-depressive depression but the difference is a difference that presumably is conditioned by the changes that have taken place in the individual as a result of his age to some extent. The best thought now is that the involution melancholias, as Professor Kraepelin called them, that is, depressions of later life, about the fifth decade, belong with the manic-depressive psychoses. They have a somewhat different prognosis because they occur so much later in life, when the recuperative powers of the individual are not so great, so these conditions are likely to be more prolonged. However, most of them are essentially benign in that they have a general tendency to get well.

Case No. 34. This is a fifty-nine-year-old white man who has been in the hospital a year, having been sent here on account of depression and somato-psychic ideas.

Family history showed that the father died of kidney trouble.

Personal history was negative so far as obtainable until 1917, when, at forty-eight, patient began to lose interest in his work, became irritable and soon stopped work. Since then he had been cared for at home.

He showed no troublesome symptoms until May 1926 when following an appendectomy his condition became worse. He lost all interest in himself and talked of his body being dirty and lousy. In December 1926 he stopped talking altogether and in January 1927 he started butting his head against the wall. The family then had him sent to the hospital.

On admission here the patient said his food was poisoned, that his skin was coming off, that his body was wasting away, that there was dirt and filth all over his hands and feet, that he must keep them covered, that he had a disease that would kill him in a few hours. During the year he has been in the hospital this patient has continued depressed, although he no longer gives expression to somato-psychic ideas. He talks very little and becomes somewhat irritable when attempts are made to draw him out of his seclusion.

This is another case of involution melancholia, the first attack of depression coming on in the involution period.

One of the features of the involution group that is of considerable significance is that aside from the fact of depression we sometimes find other symptoms coming in. In the first place, the involution group instead of showing up quite like the depressions of the manic-depressive group shows up more particularly like the mixed states of the manic-depressive group. We do not so often get in the involution group the amount of retardation, slowing up of the thought processes and of speech, etc., that we get so characteristically in manic-depressive depression. Another element that comes into view much more in the depressions of later life, the involution depressions, is that we get a much more elaborate tendency to delusional formation and to the presence of hallucinations, which makes the picture very much more like the picture in dementia precox. We frequently see these symptoms in these cases and when we do we think we are dealing with a more malignant situation that is allied to the precox symptomatology more closely than to the manic-depressive symptomatology. These people stay depressed for many years and often die in the depression. They may stay depressed until they get into the arteriosclerotic period, when they deteriorate.

There are one or two other things concerning the manic-depressive and involution group that I will tell you about. In the first place, I want to give you some idea of the profound significance of this kind of reaction. The matter of constitution has been the subject of medical thought for at least 2,000 years and perhaps longer. Every

once in a while it throws up to the surface. At the present moment it is very much in the air and we are very much interested in what is known as constitution. The most significant contribution to the matter of the constitutional make-up in the psychoses that has been made recently is that of Professor Kretschmer, who has written a very wonderful book on *Physique and Character*. The book has been translated into English and is well worth reading. You will remember that I told you that Professor Kraepelin had outlined two large and distinctive types of psychoses, the benign and the malignant. The benign type he named manic-depressive and the malignant type he named dementia precox. They are distinguished by their outcome—the manic-depressive getting well and the precox not getting well. They are also very definitely distinguished by their symptomatology. Now Professor Kretschmer probably said to himself, If this concept of Professor Kraepelin is true, if there are two great all-inclusive groups of the functional psychoses, then there must be some fundamental reason in the make-up of these individuals why they should have one of these forms of psychoses rather than the other, in other words they must be constitutionally predisposed to either a benign or a malignant sort of reaction. So he undertook to formulate his constitutions upon the basis of their anatomical make-up, their structural features, and he made a vast number of measurements and observations upon manic-depressives and dementia precoxes, or to speak in language which is a little easier because it involves only mononyms, the cyclothymic and the schizothymic group, the cyclothymic group being the manic-depressive group—not only the manic-depressive psychoses but the whole group with affect fluctuations within normal limits as well, the people who react emotionally to their various life problems. The schizothymics are those who react with a shut-in type of personality. He was inclined to think, and most of us believe there is a considerable measure of truth in what he found, that there are distinct physical characteristics in these two types.

You will not notice those physical characteristics in these patients. It is difficult to outline. One has to make careful measurements and cannot trust the eye. A patient weighing 200 pounds after becoming ill may soon weigh 90 pounds, but generally speaking the manic-depressive belongs to what Professor Kretschmer calls the pyknic type, which comes from a word meaning fat—refers to distribution of the fat. The pyknics tend to be well rounded persons physically. They are usually not excessively fat but they have a goodly distribu-

tion of fat with a tendency to considerable girdle distribution, particularly in men. They are not heavily muscled, their limbs are rounded, rather graceful, especially the hands with small fingers and joints, rather tapering. The body cavities are large—the head, the thorax and the abdomen. The lungs are foreshortened, the thorax is broad and deep and the intercostal angle is wide. The head is round, not so high, broad, and the face is five-cornered like a pentagon. The neck is short and thick set between heavy shoulders which are rounded and stooping forward as if they would slide over on to the large, deep, heavy chest. That, roughly, is the description of the pyknic type. Now what the connection is between that physical make-up and this psychological tendency Professor Kretschmer does not suggest, nor does anyone else. Nobody knows. That is the next chapter and the next chapter has not been written. We cannot tell what the connection is. I can formulate an hypothesis but it would be just speculative so perhaps it is not worth while. At any rate, here we have a suggestion that we are dealing with something that is very profound in the make-up of the individual, because there is good evidence that in this type of individual there is a definite anatomical and physiological structure. So it is very profound and all the psychological analyses in this matter have gone very deep. The psychoanalysts place it back in the pre-genital period, meaning the first five or six years of life anyway. So much for constitution, except that I might say that a great deal is being written about it and if you are interested in the subject you will find that there is a great deal of material about it coming out in all directions. The Germans are getting out a five-volume work on the pathology of the *Person*, the entire individual, a new departure in pathology.

I have told you of the self-preservative instinct and the race-preservative instinct, that the self-preservative instinct is characterized more particularly by food hunger and the race-preservative instinct by another kind of hunger, sex hunger, and that these are fundamental instincts. Now let us talk of them in a little different way. We can still think of the race-preservative instinct as founded in propagation and sex but of the self-preservative instinct a little differently. The self-preservative instinct has to do with the ego make-up of the individual. Self-preservation when followed out means that the individual undertakes the maximization of his ego, tries to be as much as he possibly can, to take unto himself and assimilate

and appropriate as much as he can of the environment, other personalities, etc. The race-preservative instinct god we may refer to as Eros, the god of Love, who has to do with race perpetuation and propagation and is quite antagonized by self-preservation very frequently and repeatedly. In other words, race-preservation means a sacrifice on the part of the ego, a very definite sacrifice. On the other hand, the maximization of the ego requires the sacrifice of the race-preservative instinct, because to the extent that one is utterly selfish, let us say, he is quite incapable of propagating himself either biologically or otherwise. So the self-preservative instinct leads to death and its god is Thanatos, and the race-preservative instinct leads to life and its god is Eros.

We have these two instincts playing against each other and coming up at all points in life and we have to reckon with both and strike some kind of balance that will be favorable to the total personality. When the balance is lost for any reason we begin to get our neuroses and our psychoses. Frequently in the psychoses we find suicide and homicide, and homicide and suicide again are only two aspects of the same thing. What are the emotions that are at the bottom of these two great instincts? The emotion that motivates race-preservation is love. The emotion which very largely is back of self-preservation is hate, very frequently at least. We cannot speak too generically. We are finding out all sorts of things and do not know just where to put all of them. But here we have a tendency that leads toward death—pure selfishness, that gives nothing and takes everything, leads toward death, and death means destruction, in this instance of the self, and in order to destroy oneself one needs to hate oneself. You will remember my description of the reason for suicide and the distinction between melancholia and grief, and that suicide is the turning of one aspect of the individual against another aspect, a conflict in which hate is let loose against the individual. So we have these two great fundamental emotions, love and hate, that we have to deal with at every turn. At the particular crises in our lives these emotions are liberated and unless they can be played off against each other for the benefit of the total personality then some kind of disaster happens. So our modern psychiatry is tending to grow up very largely about the question of the origin, the development and the growth of the ego instincts, and the utilization of the hate component—whether it is utilized by being turned against the self for self-destruction or by being turned against the outer world for destruction, or whether it is

integrated adequately with the race-preservative instinct and the emotion of love and can be used to mobilize certain tendencies that need to have aggression and enterprise back of them, instead of leading essentially to destruction it then reënforces the love instinct in certain directions that need force and power and capacity for readjustment and so is helpful. The emotions back of the ego instincts tend to be destructive if they cannot be adequately integrated in the personality, but if they can be adequately integrated they are of great value.

In these conditions of the manic-depressive psychoses we see exactly this lack of integration. We find the emotions running loose in the manic state—the patient is free from all kinds of repression, free from the feeling of sin, is having a magnificent time. Then in the depressive stage we find the patient regretting all these things. The hate that in the manic stage may be turned against the environment—because the manic is very destructive, tears clothes and breaks out windows and fights everybody—all this destructive tendency that was used in that way in the manic phase in the depressive phase we find expressed in delusions of sin and unworthiness, turned against the personality and leading to suicidal attacks upon the personality. If you get this concept of these two great emotions¹ presided over by Eros and Thanatos that represent the forces of the personality for creativeness or for destructiveness, and which must be captured and integrated and built into a pattern that is for the benefit of the total personality, you can see how in the psychoses these forces are disrupted, their integration is made impossible, they operate independently and the tendency is toward destruction of the personality.

The manic-depressive patient does not deteriorate. The involution melancholia patient does not deteriorate unless he has the malignant symptomatology that I have called your attention to, and even then he does not deteriorate rapidly. The tendency of the involution melancholia case is to deteriorate only after a considerable time, after he gets into the senile or arteriosclerotic period.

¹ These two groups of emotions I call the *sympathic* and the *antipathic*.

LECTURE X

PARANOIA

We will take up briefly to-day the subject of paranoia, not that paranoia is a very important subject statistically from the point of view of the number of paranoiacs that there are but it is important from the point of view of the mechanism involved, which is seen very frequently in all sorts of conditions. We have paranoid reactions in dementia precox, in prison psychoses, in senile and arteriosclerotic psychoses, etc. It is a very common type of reaction. However, the very few paranoiacs that do exist usually make a great deal more trouble than the larger number of the other psychotic groups, so they really have a very considerable importance.

Paranoia is a classification that is of comparatively recent origin. It is only during the last few years that we have had a clear-cut, so-called true paranoia in our group of nosological entities. Of course we have always been familiar with the type of individual who had so-called delusions of persecution, but Professor Kraepelin, as he did with so many other conditions, outlined a very small, carefully defined group to which he gave the term of true paranoia. The characteristics of true paranoia as Professor Kraepelin defined it are these: the delusion of persecution, which is highly systematized, which means that it is woven into the warp and woof of the personality make-up in a very intricate and profound way; the chronicity of the disease and its irrecoverable nature; the preservation of the intelligence of the individual throughout long years of affliction, in other words the absence of deterioration. Also, in the clear-cut, true cases there is an absence of disorders of the sensorium, such as hallucinations. It is a disorder, speaking in the language of the older psychology, which is confined to the intellectual field. Of course that is not true, but that is the way the older psychologists would have thought of it and descriptively you can understand what I mean by that.

The paranoiac develops a delusional system which becomes more and more intricate as he gets older and older, which involves him more and more deeply, which forces as it were concessions more and

more from every aspect of his mental life until he finally lives continuously in this delusional system. The older psychiatrists used to say that it took a man of brains to be a paranoiac. It is very difficult to find a paranoiac to present at a clinic and I have not one to present to-day because with our four thousand-odd patients we cannot find a good case of paranoia among them. Paranoiacs are too smart to stay in institutions of this kind. It is too easy to make juries and courts believe what they say and they are energetic and hard working so that they find ways of accomplishing what they want to. They almost invariably get out of institutions in one way or another.

I have given you a very constricted concept, which is something to be suspicious of always because there are no such things in reality. They are intellectual devices that make it easier to classify material, classification pigeon holes that are of practical value to us, that is all. When we take up dementia precox in the next lecture we will find a whole group of cases classified as paranoid types of dementia precox, and we will find that the criterion there, as with other types of precox, is that the patient during the course of years deteriorates. Professor Kraepelin sorted out this group that have paranoid reactions and set them apart from the others, and one of the things characteristic of them is that they deteriorate more slowly than the others. They had these characteristic paranoid delusions and inclined to have hallucinations like precox patients but they did not deteriorate as fast so he concluded they should be grouped specially. He changed his ideas in the latter part of his life and created a group that he called the paraphrenias. The paraphrenias were a group that stood midway between a certain few cases of paranoid dementia precox, which he left in the dementia precox group, and paranoia. They did not deteriorate as rapidly as the paranoid precox, nor retain their integrity quite as well as the paranoiacs. So you see we have a series of gradations here. The main thing is the mechanism and the presence or the absence of deterioration. Remember when I say deterioration that I do not necessarily mean actual destruction of brain tissue; we do not know much about deterioration in these groups of psychoses from that point of view. We are thinking of deterioration in terms of the maladjustment of the individual at the social level, of his inability to live the normal life the average human being lives in relation to his fellows. We are thinking of deterioration as a social phenomenon more particularly.

I have said that the delusion of persecution is rather characteristic

of paranoia. Let me define the mechanism a little more definitely. The mechanism that is at the bottom of the delusion of persecution is the mechanism of what is known as projection. Paranoia is a projection psychosis. What does that mean? It means this: that when an individual of this particular type has a difficulty in the world which he is not able to handle adequately, instead of realizing that the trouble is in himself he blames the other fellow for it. There is nothing so very abnormal about that. I suppose everybody does that more or less. We all tend at times to project our difficulties upon the outer world. From the time when we were babies and kicked the chairs we bruised our shins against to the later outbursts on the golf course when we miss a shot, we are more or less indulging projection mechanisms. Here again we are dealing, not with the absolute but more or less with matters of degree. We are able to indulge our projection mechanism as long as we do not go too far and attract too much attention with it or get into too many social difficulties with it. The paranoiac uses it to a very large extent in solving all his life problems and in that way he gets quite out of touch with reality, is not able to swing back but uses this mechanism all the time.

I have in mind the mechanism of paranoia in an older man who was beginning to fail because of arteriosclerosis. He goes to a Soldiers' Home and because he has had experience as an accountant he is given a job in the bookkeeping office and he goes to work keeping books. That would have been a simple matter for him a few years previously but he is failing now, his memory is not so good, his capacity for concentration is not so good, he makes mistakes. In order to avoid a realization of his own difficulties—I say “in order to” as if he were conscious of it, but he is not—he develops a projection type of explanation. He does not realize that he is getting to be an old man and is making mistakes. He thinks the young fellows at the desks near him are putting up jobs on him, that they are getting at his books after he leaves them and putting mistakes there so that the mistakes will be credited to him, and they are bothering him in this way so as to get him out of the office and get his job. He develops that kind of mechanism to explain the situation. You see he is getting a long way from the facts. He is getting into a situation where he is out of touch with the environment to an extent that seriously impairs his capacity to get along, to earn a living, etc. That is a paranoid mechanism; that is projection.

Because of lack of time I will not go into the details of the

psychoanalytic interpretation, except to say that the psychoanalyst believes that the basic factor in paranoia is the retention of a somewhat too active homosexual component in the make-up of the individual. I will explain that very briefly by saying that the psychoanalysts believe that we all pass through a stage of psychosexual development properly called "homosexual"—"homo" meaning, not man, but of the same sex, a period in life when the little boy likes the little boy and the little girl likes the little girl, when the child has more interest in children of the same sex than in children of the opposite sex, and that we never quite leave that stage of development fully behind. It is very good that we do not because if we did we would not be able to get along with people of our own sex at all. Our ability to get along with people of our own sex depends on a retention of this homosexual component and its proper weaving into the pattern of the personality—as I said in the last lecture, for the benefit as it were or to the advantage of the total personality situation. Now in some people, as you know, this homosexual component retains a very exaggerated importance in their make-up, and when that happens they are thrown out of alignment and difficulties of adjustment are rendered very considerably greater. The psychoanalysts believe that this is at least a very important aspect of the paranoiac.

Professor Freud, in his article on the so-called Schreber case, the case of an old paranoid professor he worked with, published in 1911, gives the various types of paranoia as a result of ringing the changes on the sentence "I love the man," as if it were a sentence spoken by a male patient. So we will say that the patient is a male paranoiac and we will take his libido formula, which is to love the male, and express it in the sentence "I love the man." Then when he tries to get out of this homosexual emotional relationship and make a satisfactory life adjustment he fails and like the old man in the Soldiers' Home, instead of appreciating that his failure is due to conditions inherent within himself, he feels his failure, not as being due to something within but as coming from without. In other words, when he approaches other people with an instinct or emotion of love and he gets no return he feels hurt, he feels pain, and he feels that hurt and pain as if it came from the other fellow. So he feels it as the opposite emotion, the opposite of love, hate, so that the sentence "I love the man" is changed to "I hate the man. Because the man hates me therefore I am justified in hating him." If you will look up in the *Outlines* the ringing of the changes on that sentence you will

see the changes in paranoia, the changing object and subject, and the total meaning of the sentence.

Now that is the way the psychoanalyst looks upon the paranoiac, as if the feeling of persecution of the individual is really the result of his original feeling of love, which is frustrated and thereby is turned into its opposite and felt as if it came from without. Here we have another example of these two types of emotions that I spoke of in the last lecture, love and hate, groups which I prefer to speak of—to take perhaps a little liberty with the English language—as the sympathetic and the antipathic emotions, the constructive and the destructive. So, as we might expect, we find among our paranoiacs a goodly number of people who commit homicide. You will remember that in melancholia we found many people who commit suicide. I told you that suicide and homicide are closely related. In paranoiacs we find a considerable number of homicides. It depends on whether the hate is turned without or within; if it is turned without we may get homicide, if it is turned within we may get suicide.

Case No. 35. This is a colored man of forty-two who was admitted to the hospital three years ago following a shooting episode. His trouble began a number of years ago when he patented an attachment for harnesses, his business being that of harness-maker. He said that at the time of the World War Woodrow Wilson took over two of his patents and applied them to artillery, without giving the patient any credit or money for it. He wrote a letter to the government complaining of this theft and received a reply saying that the matter would be investigated. He says that since that time the government has been persecuting him everywhere he goes. Agents of the government undermine him and tell his employers stories about him so that he is discharged.

For several years he had been working for an insurance company, and he thinks the manager of that company paid him less than a living wage in order to test him out. Finally the manager was influenced by the government to discharge him and attempted to do so one morning. A quarrel ensued and the patient drew a gun and fired at the manager, who started to run, after the first shot. The affair occurred on F Street and after the second shot the patient was overpowered and disarmed by a crowd which had gathered. Patient says his claim against the government was formerly about ten million dollars, but now he thinks it is worth about two hundred millions.

During his stay here the patient has kept to himself and says he spends his time thinking about his various business affairs. He has shown no antagonism to his present environment and believes that perhaps

the whole affair was arranged by the government so that he would have a place to wait while his claim was being settled.

This patient is probably not a true case of paranoia but one of the cases that fall in between somewhere. The history is a fair statement of paranoia. Not infrequently these paranoids do shooting without any intention to hurt anybody—they think that by attracting attention they will get justice. Here, however, apparently there was a real row, with some intention of shooting at some specific individual. The patient states that the black band that he wears around his head is a “crest” and that he comes from India. The band evidently has some significance as to his heritage.

We can not spend much time on these cases but I will just say in passing that we have no agreement at all with the old psychiatrists who thought that this disturbance was entirely in the intellectual field. Of course nothing can be entirely in the intellectual field, because there is no such thing as an intellectual field apart from the rest of the psyche, any more than there is such a thing as a heart apart from the rest of the body. All these distinctions are perfectly artificial. In reality there is a profound affect, emotional disturbance, here, which is quite as profound as the intellectual one. It does not throw up on the surface ordinarily but once in a while it does. You see what happened here—we almost had a homicide.

Case No. 36. This patient is a real paranoiac. I will not go into the history in his case as it is long and complicated. He has been in the hospital some time and he comes to the clinic every year, is good-hearted, accommodating, etc. A few years ago just outside of Washington he killed a man with whom he had been having some trouble. I will not suggest the explanation as I am sure he would not agree with me. This trouble dated away back in the family and finally culminated in the shooting of this man. The patient felt perfectly justified as he believed this man had been doing a number of things he should not. The patient felt that he had at least a moral right to protect himself. He said he had been followed around by detectives and that all sorts of things had happened to him—he has an exceedingly complex and interesting history. There is some evidence that there is a certain amount of deterioration in this case, the kind of deterioration I have told you about. The patient lives in Howard Hall and occupies himself fairly well most of the day writing out histories and doing other typewriting and is reasonably useful. He is fairly comfortable and gets along quite well in the more

or less artificial environment here. As you look at him you would not think any of the things I have told you about had ever happened.

[Patient stated that his constitutional rights had been violated for five years, that he ought to be tried as he felt that he was justified in what he did, and that if he could get proper consideration of his case before a court and a jury he could make it clear and would come out all right, that he is entitled to that chance, that various Justices helped to keep him out of his constitutional rights and his money and got him locked up here, etc.]

You see I asked him something about his case and he immediately goes into a description of the situation. He feels that he ought to be tried because if he is not he is likely to stay here any length of time, would have no show. As to his description of the situation, you will remember that I told you that the delusional system occupies more and more of the field of consciousness, reaches out more and more, like an octopus. The patient feels that his chances have not been good in the past and that the future does not look bright.

There is no indication of hallucinatory experiences in this case. Before we had this very narrow definition of paranoia we used to think that hallucinations of hearing belonged to the picture. Hallucinations of hearing do belong to the picture in the precox type of paranoia, but they do not belong in this restricted group. So here we have a patient who is very close to a true paranoiac.

Case No. 37.—This patient was admitted to the hospital in January 1928 at fifty-one.

Family history showed no hereditary mental determinants.

Patient's early life was uneventful. He had a happy home, made exceptionally good progress in school and graduated from a four years' college course in three years. Following graduation he began life as a farmer and then worked at various rough occupations, such as road construction and threshing, finally becoming a foreman of labor gangs, occupying himself in that way during the last twenty years—working during summer months and during the winter spending his time in a large city, living near a library where he could occupy his time in reading. During the last fifteen years he has spent the winters in Washington and has taught himself to read French, German and Latin and has become conversant with classical literature as well as with scientific writings and mathematics.

About 1915 he became infatuated with a woman, became acquainted with her and then began writing her love letters which were usually couched in Homeric phrases because, as he stated, he could not as

adequately express his own feelings. This lady informed the patient a number of times that she wished him to desist and she also threatened to report the matter to the police. He continued to send these letters, she finally turned some of them over to the police and the patient was arrested and sent to a hospital. In January of this year he was transferred here.

I presented this case to you because I wanted you to see how a patient looks who is entirely in possession of his intellectual integrity and in whom have taken place none of the processes of deterioration that we are accustomed to see and that change people so much in outward appearance. We have here a man of education who is kindly, alert to his surroundings, in good contact, who is getting along perfectly well in this environment. He has parole of the grounds here. At Gallinger Hospital before he came here he was so well liked by everybody who contacted with him that there was a serious feeling on the part of many that there was nothing the matter with him, that his detention for observation was more or less unjust, etc. In other words, he made a perfectly normal appearance to people that he contacted with, which is very different from the impression given by most pictures. We have had only one other patient at the clinics who has given this impression—the very nice looking, pyknic type, young woman who was slightly hypomanic and who was shown with the manic-depressive group. So in the patient you have just seen the picture expresses normality in all its obvious manifestations.

You see from the history I have given that this patient is essentially an intellectual. The paranoiacs belong to this introverted type—the introverts, the thinkers rather than the doers, the people who develop the philosophies, etc. The typical paranoiac develops some kind of philosophy. The world as it is does not suit him so he builds up in his philosophy a world that does suit him, in which he can live more comfortably. That interpretation may throw a certain amount of discredit upon philosophers in general, and perhaps that is all right. Perhaps after all people who philosophize are dissatisfied with the world. Perhaps a philosophy, as people are inclined to say, is an expression of the philosopher's own particular, private psychosis, but as long as the psychosis remains private it does not attract any particular attention.

There are a great many different types of paranoiacs. Besides the philosophers we have the reformers, the litigants, people of new religions, all that sort of thing. We had one patient who was with us quite a while, one of our very smart men. He got out on a habeas corpus proceeding and since he has been out he has spent most of his time attacking the institution. You may have seen indications of it in the newspapers. He is a very agreeable person, of very good presence, very good address. He is intelligent and very convincing. The convincing person who is talking to you about something you do not know anything about is very apt to convince you. So he talks to people about things they do not know anything about, to newspaper reporters, to lawyers, etc., etc. Incidentally he publishes a journal of his own which contains some of his articles in which he tells what a terrible place this hospital is and what a terrible lot of people we are, and about injustices and horrible crimes and misdemeanors that we commit here every day just because we like to do vicious things, because we are a bad lot. The articles are thoroughly illustrated so that you can see what it is all about. He is exceedingly critical, not only of us but of the courts, of almost everybody—I don't know that anybody in particular escapes his criticism. He spends most of his time in this sort of activity. He collects other people around him who are similarly inclined so that we have quite a large experience in extramural psychiatry—a game that has no particular rules and where every fellow is for himself. It is a very exciting game, I assure you.

Case No. 38. This patient would not come to the clinic. At one time it was feared he was going to assassinate President Wilson. He had a revolver with which he was apparently going to shoot the President, but fortunately he was apprehended before anything happened. I will give you an idea of the sort of delusions he had:

He says his grandfather burned a Mason to death for rape. His family has always been violently anti-Masonic. The patient states that in a certain town, every 4th of July there used to be a Roman Candle fight between boys of Northern and boys of Southern families. This was a great event and thousands came to see it. Each year several of the combatants died of burns and injuries in this fight. In 1897 he with four companions fought for the South against twenty-three boys of the Northern sympathy. His side won a decisive victory, so badly injuring two of the other side that they died. He states this was the first year the Southern side won and he as "Commander —————," their leader, won State-wide fame. The Governor personally congratulated

him. In his words, "Women died from joy, and strong men wept," over this victory. The next year the Governor was reëlected on his pledge that the funds of the State were at the disposal of "Commander _____." In 1899 the mother married a Shriner. This was a Masonic plot to steal his farm, and revenge themselves upon him. After the ceremony the groom's fellow Masons seized the bride, tied and gagged her, carried her to the Masonic Temple and raped her. They received no punishment for this outrage as all of the officials of the town were Masons. The patient began to preach against Masonry on the streets. In 1903 in a town in Oklahoma six Masons began shooting at him from the housetops. He secured a rifle and standing in the middle of the street, unafraid, unharmed by bullets that tore his hair and scorched his skin, he killed them all, one by one."

You see the patient is developing here very plainly alongside the delusion of persecution a delusion of grandeur. A delusion of persecution and a delusion of grandeur are apparently more or less ambivalent opposites. Referring again to the sentence "I love the man" used by Professor Freud, when the whole sentence is contradicted and has to read "I love nobody" it then has to be qualified, because this love, libido, *élan vital*, psychic energy, anything you want to call it, has to go somewhere. Where does it go? There is no person or interest or anything to attach itself to, so it flows back on the individual himself and he loves himself to the exclusion of everything else, and this produces this aggrandizement of the ego. The ego as it were swells up with this new accession of energy that is added to it as it flows back from the outside world, so we have this enormous egotism that goes along with the paranoiac. I remember a very characteristic patient I had some years ago, who incidentally had been running for Vice-President—a man of parts as most of such men are. He told a very complicated story about his persecutions. Queen Victoria was living then and he said she was at the head of the whole thing, she had hundreds and thousands of men engaged in digging tunnels under the buildings and the streets, and she was sending men through these tunnels to squirt poisonous fluids on the patient through hypodermic needles that pierced the walls. Think of it—thousands of people who had nothing to do but to kill him, and they did not succeed, he was too smart for them. With all this series of delusional experiences he had a wonderful smile which in effect said all the time, "You see how smart I am. They can't do it. I am a match for the

whole bunch." It is quite common to find that combination of the delusion of persecution and the delusion of grandeur.

Case No. 39. This patient was too ill to come to the clinic or he would gladly have done so. I will go into his case only briefly. He is a Swede, I think, and he came to this country and went on a farm and got badly tangled up financially. He did not understand the customs of the country, had a lot of difficulties and got a lawyer. Things kept getting worse. Finally this lawyer was elected to the Senate and the patient in his confusion thought the Senator could straighten the thing out. When this was not done the patient came to the city, called on the Senator, pulled out a gun and shot him. Fortunately the gun did not have a bullet in it. I do not know whether that was just Providence or was one of those fatalistic things that happen so often. In the *Life of Queen Victoria* by Strachey, it is recited that Queen Victoria was shot at something like six times, I think, most of the times by little precoc boys, and in practically every instance the revolver had no bullet in it. You see this is one of those gestures that is not to be taken at face value. I do not know whether this patient wanted to harm the Senator or not. The patient is a nice old fellow and is very peaceable. He is in the hospital building now and a petition for his pardon is pending.

Case No. 40. This patient, who did not come to the clinic, has a somewhat more grotesque history. He said he had been chased all over the country because they had been trying to get him to marry the President's daughter. He had a terrible time. He also said that during the War—

"The British Government insisted that I should accept a personal commission in their service and be signatory to an agreement by which they should have first supervision and sanction of all orders before submitting (them) to (the) Allies, to which I could not consent, so my commission was and had to be acceptable to them on a gentleman's agreement between us and I insisted upon Marshal Foch being in command, when it could not be agreed on Pershing or Haig. Such orders were later confirmed, that all Allied super-movements were to be acted upon when given by me, but countersigned by Marshal Foch."

He had quite an experience in the Army but that is a long and complicated story.

We had another patient in the hospital who had a wonderful invention for getting gold out of the ocean. Of course that is not so difficult. There is a lot of gold in the ocean but the trouble is that it costs ten dollars to get out ten cents' worth. However, this patient had it fixed so that it paid. I think he invented a ship that passed all

the water in at the prow and the water passed over a lot of electromagnets that captured the gold. He just had to go sailing and would come back with thousands of dollars. His invention was so important that everybody wanted it. When he finally came here he had spent forty or fifty years being chased all over the world by people who were trying to steal his invention, he had had a very vivid and exciting experience.

Many of these personalities who have these delusions impress one much as did the patient I showed you here who had killed the man—a quiet, gentle sort of personality who protects himself by his delusional system, does wonders that he could not do in any other way. So you see the paranoid reaction falls, as does the manic-depressive group, in the group of compensatory psychoses. If you work out the meaning of the psychosis you find that it is compensatory for something in the life of the individual that he has not been able to attain.

LECTURE XI

DEMENTIA PRECOX

We will open to-day the subject of dementia precox. This is in many respects the most important of all of the psychoses because it supplies the greatest number. It is most important at least in institutions like this, because a very large proportion of the patients in such an institution belong in that category. My lectures on it are the last two of the course because it is the most difficult psychosis to understand. I suppose you will not understand it very well, none of us do, and but for what has preceded you would probably be quite lost in the fog. However, with the discussion to date you may get some inkling of what it is all about.

You will remember that when we talked of manic-depressive psychoses I said we could talk of the reaction in that group as psychological because we could feel ourselves into the reaction of the patient. We could understand how a patient might feel depressed or euphoric, the reaction of the patient is within the limits of our own personal experience very largely. The depressed patient or the slightly euphoric patient is not acting in a way that is so foreign to us that we can not comprehend it in our feelings. We have ourselves all been more or less depressed and more or less euphoric. With the dementia precox type of patient, however, we find ourselves quite out of touch. We think of the type of reaction of dementia precox patients as being unpsychological for the reason that the things they say and the things they do are so different from the things we say and do and represent feelings that are so foreign to our usual experiences that we can not feel ourselves into their way of reacting. So it was probably from experience with this type of patient that we find originating such words as "alien," etc. We have the term "alienist," the person who deals with mental patients, and the patients are spoken of as "alienated." The French still use the word *asile d'aliénés*, their asylum for the alienated, the people who are apart, who are different from the rest of us. This aspect of difference is what strikes our attention most forcibly. The patients talk a language that we are quite as incapable of understanding as we are of

understanding a foreign language unless we undertake to learn the language and translate it. That is really what we have been doing in psychiatry for many years—we have been learning the language of the patient, to translate it and to understand it. If we want to read German, or French, or Italian, or Spanish, we have to learn the language. That is a comparatively simple thing to do. But if we have to learn a dead language that has no grammar or no dictionary that we can turn to we find it much more difficult. That is precisely what the job of the psychiatrist was when he tried to learn the language of the insane, with no grammars, no written books to which to turn for definitions. He had to learn it in much the same way that the archaeologist had to decipher the Egyptian hieroglyphics.

So to begin with, the dementia precox psychoses are unpsychological. Consequently they are essentially regressive types of psychoses. I wonder if you understand what I mean by that? I mean that the dementia precox patient is using ways of reacting to the problems which the world of reality presents to him that at some time in the course of his history or of history in general have been successful but which he should have left behind for better methods in the course of his development. I will give you an illustration, not from the field of dementia precox particularly but one with which you are all familiar. You know when the baby wants something he very frequently cries for it and he cries so hard and so long that finally somebody comes along and furnishes it. If he is hungry he cannot put that in language but he cries hard and long enough until somebody comes and feeds him and quiets him. That is the method by which the baby gets what he wants in life. Now there are many people who retain that method of reaction throughout adulthood. They are adults chronologically speaking but if they are incapable of getting things by their own efforts they cry for them. They appeal to an individual's sympathy or generosity or else they make such nuisances of themselves that the things are given to them to shut them up. They get things by that method. Now that method is essentially an infantile method. It may work but it is not a very effective way of getting things, nor is it a very satisfactory way for the person who gets them. It is an inadequate and more or less ineffectual tool, as it were, with which to attempt to manipulate the world of reality of adults. Our precox patients are invariably attempting to deal with this reality of adulthood by such methods. I say reality of adulthood because the reality of adults is different from

the reality of children, that is, the world is after all an experience and as an experience what it is depends as much upon the persons who experience it as upon the thing experienced. The precox is invariably using methods that are more or less infantile, or more or less primitive, to handle a world of adult reality. Therefore, as you can easily see, he gets into one or another sort of jam, some kind of difficulty, usually at the social level, which attracts attention, and he is sent to an institution because he is not assimilable by the herd, cannot be metabolized by society, cannot function as an efficient unit.

Now I will try to illustrate to you one of the most valuable concepts, I think, that you will find for understanding this particular precox type of reaction. I have given you an instance of the growth of the psyche of the child, how the child has to learn by a series of trials and errors to differentiate itself from the rest of the world, how for the child a few months old crawling around on the floor, for aught the child knows to the contrary, the rubber ball with which it may be playing is or is not just as much a part of the environment or a part of itself as its own foot. The child's foot lies in front of the child and the rubber ball lies in front of the child, and it is not given to the child by any innate and inherent magic to know that the foot belongs to it and the ball does not. That is something that has to be learned, the child has to learn it, and he learns it by a series of experimental trials with reality. All of the more or less incoherent movings and feelings and crawlings and touchings, etc., of the outer world by the child are experimental performances calculated to build up this psyche, one aspect of which is the capacity of differentiating itself from the outside world, the ego or the "I" from the "not I." I will just give you an idea how the child arrives at this distinction. Almost everything that the child takes hold of, as you know, it more or less reflexly sticks in its mouth. It sticks the rubber ball in its mouth and it gets a sensation in the mouth. It sticks its own foot in its mouth and it gets a sensation in the mouth plus a sensation in the foot. So the total experience in the two instances is very different and is sufficient basically to start a process of differentiation between the rubber ball and the foot and ultimately results in the child recognizing the rubber ball as part of the environment and the foot as part of itself.

I give you that illustration because herein lies something that is very important for the understanding of the precox. This differentiation of the "I" from the "not I" is something that all of us

individually have had to learn, and we learn it with greater or less success. We are not all quite the same as regards the end result of that learning, but at any rate we have succeeded fairly well in determining what belongs to us and what does not. Some people do it better than others. Now the savage, that is, man not in his individual history but man in his history as a race, has also that same problem, to learn to differentiate himself from his environment. The savage has not learned to make that differentiation very well. The savage is still very largely pretty well mixed up on the whole subject. In the short time we have we cannot go into the psychology of this except to say, very roughly speaking, that if you are acquainted with the traditions of savages you will recognize that the savage is constantly attributing to all natural phenomena causative agencies that are essentially human in kind. The waterfall is animated by a spirit, the trees are inhabited by spirits and these spirits talk and communicate with the savage. They give him some idea of what is going on by signs that we would call more or less mystical. The dead all live for the savage as they do for lots of us, especially people who have spiritualistic ideas, and they communicate with the savage. The savage spends a lot of his time in his dealings with departed spirits.

If we should go into the psychology of this to a considerable extent we would find that here as in the precox what is happening is that the individual is projecting. We get again this mechanism of projection of certain things he feels in himself on the external world. He knows he can move a leaf or a blade of grass by blowing on it and so it is a very simple transition in his very logical mind to come to the conclusion that the wind is the breath of some larger spirit than he which bends the trees because the wind is stronger than his own breath. It is very easy to build up a spiritualistic or anamistic universe in that way by projecting what he feels in himself on the environment. Now the precox does the same thing. A well known French anthropologist calls this lack of differentiation between the individual and the environment *participation mystique*, mystical participation, in the environment, in which the individual and the environment form more or less an interrelated whole in which each one participates in the other on the basis of a relationship which is essentially and fundamentally a mystical one.

And so we shall see in our precox patients—and because we cannot go into this except very briefly I am stressing one point that seems perhaps most illuminating—all sorts of ideas of their ability to influ-

ence the environment and the environment's ability to influence them, and the whole thing will strike us as a very mystical thing, very unreal, very different from ourselves, if we do not have this key to its interpretation. If you will take the trouble to examine some of the things that go on inside of yourselves you will be surprised to see some of these things happen. How many of you knock wood, for example, or will not sit thirteen at table, or do many other things which intellectually are asinine but emotionally are compelling. Probably every time you do one of these things you are ashamed of yourself, but it is easier to do it and allay that feeling of necessity which impels you to that particular kind of performance than it is to bother struggling with it, and so you carry it out. So after all, just as I told you about the projection mechanism which is the key of the paranoid symptom complex, it is a mechanism we all use. The same can be said about all the other mechanisms we see in the psychoses. We could not get along without them. It is just a question of emphasis. It is a question whether the particular use we make of the particular mechanism is a use which is in the service of the personality as a whole or whether it has become so far out of alignment with the needs of the personality as a whole, whether it has become so excessively emphasized, that it distorts that personality and throws the individual out of harmony with his surroundings, physically or socially or what not. It is merely a question of emphasis and the key to the whole thing is whether the mechanism as we use it is in the service of the personality as a whole.

You see we are dealing here again, in the language of my first lecture, with mechanisms as they involve the ego, as far as I was able to go, and more specifically as regards the ego in relation to the external world. You will remember that I made a differentiation as between neurosis and psychosis. The neurosis had to do with an intrapsychic difficulty but ultimately the thing that distinguished the psychosis was that the difficulty was between the psyche, the ego, and the external world, the result being that from our point of view as we look on what appears to be happening the patient is distorting the external world. The external world from our point of view is distorted as we see it through the eyes of the dementia precox patient.

As you may know, when Professor Kraepelin first described the dementia precox group of psychoses he described three varieties: the hebephrenic, the catatonic and the paranoid. In later years he described a number of other sub-varieties and you will recall that I

told you that he changed a good deal in his attitude and ideas as to the paranoid group. I shall have something more to say about that a little later, but our idea is that the whole paranoid mechanism is quite different in many ways from either the hebephrenic or the catatonic type of mechanism. The paranoid psychoses, as I told you, are essentially compensatory, whereas the hebephrenic and the catatonic groups cannot be described so well as being compensatory. The hebephrenic is essentially noncompensatory or decompensating, the catatonic essentially defensive in a certain way. I will not present any cases of catatonic dementia precox to-day but will deal only with the more or less decompensating types.

Case No. 41. As to the onset of this patient's trouble, the history states that he was sitting at the table eating his dinner when a funny feeling came over him which he cannot describe exactly. He went upstairs and there heard someone whistling. He looked out of the window and heard lots of voices talking but he could not tell what they said. He got the idea at that time that his sister was having a baby but he does not know yet whether this was true or not. Something snapped in his head and he began to hear voices and noises from all over town. It seemed that whenever an automobile passed his house he knew exactly who was in it. He heard voices shouting such things as "yoo hoo," "you'll go to work now" and "Come on, we'll take you for a ride around town." He could hear footsteps of people all over town. About this time he began to be aware of a doctor across the street who was tapping on his window as if making signs to him, but the patient could not get their meaning. He tried to sleep that night, but could not do so because of a light in this doctor's home which went on and off. The doctor seemed to be cutting a man open, putting a towel in him, and then buttoning his coat over it. All this time the doctor was making signs to the patient. The next afternoon while the patient was upstairs he could smell ether in the house. When he started to go downstairs this doctor peeked his head around the corner, so that patient went upstairs again. Somebody climbed up the telephone pole outside and looked through the window at him, etc.

The patient's statement that something snapped in his head at the onset of his trouble is very typical and yet I have no idea what is means. That is something that is very often described by patients and leads to all sorts of X-ray examinations, etc. The patient's statement that whenever an automobile passed his house he knew who was in it is an example of this mystical interpretation—of course he

knows who is in it if the whole experience is a projection mechanism, an experience within himself that he is projecting. In that case of course he would know who was in it. The whole description of the onset given by the patient, hearing voices, the actions of this doctor across the street, people looking through the window at the patient, etc., etc., gives a first impression that is very different from anything we have had. You see how strange the whole thing makes you feel. Here we have a patient who understands what we say to him, answers coherently, makes a fairly good appearance, yet this is the kind of material he gives expression to. Now perhaps I can lead you to some kind of understanding of this material.

Imagine what kind of world this would seem to you if you were only a few weeks old. How do you suppose the child of a few weeks or a few months interprets the various noises, lights, colors and personalities in its environment? You see how utterly remote from our capacity to understand them such experiences must be. We have all had them but they are all buried in the limbo of our so-called infantile amnesia, they are all gone. Quite frequently we get in dreams very clear indications of a return of that material, and those indications show very clearly that the child world and this world that this patient lives in is exceedingly different from the world we live in. One of its main differences and one that cuts us off almost completely is the language factor. The child cannot talk and tell what it sees or thinks or feels. We talk so much that we forget sometimes the enormous significance of language and how totally lost we would be in a world without it. The child has no language in the sense of a spoken language. It has of course a language of signs which the mother can interpret fairly well but the child does not consciously use the signs and it has no spoken language to begin with. What is there then is essentially feeling, and so we cannot interpret this language of these people who are expressing themselves in these infantile regressive ways if we insist upon interpreting it in the terms of our adult thinking processes and in forms that are linguistic. We have to translate these things basically into emotional values and that is very difficult. It is a matter largely if not altogether of feeling. Even the psychology of emotions has very little language. We have any number of feelings, feeling experiences, and yet we have very few words to express them in. If you try to express your feelings to anybody you will find how poverty-stricken your language suddenly becomes. Our patients frequently say to the doctor when they try to express these

things that they feel "queer" or "strange" or "confused" or some such thing as that, which leaves one with a very hazy idea as to what the experience of the patient really is. There are no clear-cut words with which to describe emotions. So when an individual has grown to adulthood and has developed a language and is able to communicate with his fellows and still has these experiences of a feeling character that belong at an infantile level of his development and tries to translate these feeling experiences into this adult language he gets this kind of result. You can see perhaps now one reason, at least, why the things that the precox patient tells us are so nonunderstandable and seem to be so unpsychological, although as a matter of fact we ourselves have similar experiences and it is merely a matter of emphasis again but we do not ordinarily express these feelings of ours and do not try to and if we did we would have almost as much difficulty. As a matter of fact we are more or less unconscious of these feeling experiences. We do not know very much about them.

I have told you that this general sense of being a part of the objective universe is due to lack of differentiation of the patient between himself and his environment, and that a great deal of the symptomatology is due to a projection of inner experiences upon the environment. Now we have a very common symptom in precox, especially in the beginning of the disease, and you see it in this colored patient when he began to hear noises and voices and all that sort of thing. The patient, or the doctor, depending on circumstances, describes that as a state of confusion, and it literally is just that. It is a state of confusion. It is described in a language which indicates that the world, the outside world, the environment, is in a considerable mix-up. The patient describes all sorts of disasters happening in the world, the world coming to an end, people dying in all directions, all sorts of destructive things are happening. The world is being dragged down over one's head, as it were. Of course what is really happening is happening inside the individual and is happening in his feeling experiences and after being projected on the outside world and translated into adult language it gives this rather grotesque delusional formation. So we quite commonly find this symptom of confusion at the beginning of a precox psychosis.

Why do we find this symptom of confusion at the beginning of the psychosis? I have said to you from time to time something about the element of conflict, that we are torn between two groups of desires, which I have indicated to you might be classified as the self-

preservative and the race-preservative on the basis of a classification according to instincts or on the basis of a classification as to their ultimate objective might be classified into two groups, the life instinct and the death instinct. We constantly have tendencies within us that are moving in both of these directions. If we are more or less successful we keep the life tendencies in us in the ascendancy and move along with a reasonable degree of success, but all of us have all these other tendencies that may interfere with our success. We are lazy, indolent, would like to be dissipated and badly behaved in all sorts of ways, and if these tendencies get the upper hand a little bit of course we are on the wrong path. We all have these possibilities and if for some reason these tendencies are activated they make this feeling of internal tension that we sometimes experience. Occasionally it happens that this condition of tension between one set of forces and another set of forces is maintained over a considerable period of time, and then owing to some circumstance the death instincts, or whatever you wish to call them, gain the ascendancy and break through. You will remember having read a day or two ago how a dam broke down. The dam built up to hold these tendencies breaks and then they flood consciousness. The individual has a tendency that is unassimilable by him and with which he does not want to have anything to do, and he has all his life kept it shut up where it belongs. Then suddenly this thing happens. Internal destruction is imminent and he feels it taking place and then in accordance with this projection mechanism, which I will not discuss, this destruction is projected on the world. He tells you the world is being destroyed. So this confusion is a very common thing that happens in the early stage of precox, and for aught I know it is when the dam breaks that one has that feeling of giving way or snapping in the head.

Case No. 42. This is a twenty-year-old white male who was admitted here two months ago from one of the branches of the military service. He was an only child and after leaving school and working a short time he enlisted for "adventure and fun." Shortly after this he was put on the sick list and transferred to the hospital. He said he felt as if people were watching him as if he were stealing something.

On admission to this hospital he seemed to be retarded and said, "I am wandering around in a daze." He told the examiner, when asked his business, that he was "a lawyer, an actor, always ambitious. I could go into a profession and learn business and be much better." Said the food would talk to him and tell him what to do, etc.

You will notice that in general appearance this patient seems to be quite burdened at the present time with the actual fact of existence.

The history develops one specific thing that should always be taken note of. The patient is an only child. Only children have an especial type of difficulty to be dealt with. By "only child" we have come to mean not necessarily the only child in the family but the only child in a psychological sense. There are sometimes four or five children in a family but one can be dealt with as if he were the only child. So we have the problem of the only child, which is a distinct psychological problem and is productive frequently of a psychological handicap.

When the patient came here he said he was wandering around in a daze. You see here the same symptom of confusion at the onset.

The patient said the food talked to him and told him what to do. You see the strangeness of such a thing, but I hope I have said enough to get you to feel a little differently about it. It is not perhaps strange. I know a number of people to whom food talks and tells them what to do. We have a whole group of hypochondriacal people who have more communication with their food than with any person in the environment. The food occupies a commanding position in their environment. There are things that must not be eaten and things that ought to be, and these must nots and oughts have a significance such as Kant, I think, spoke of as categorical imperatives. You see I am trying all the time to bring these experiences of patients within your ken by relating them to things that are happening to you and your friends and all of us all the time.

I will tell you briefly of a letter this patient wrote to the Secretary of the Treasury. I will not read it as it is very long, but in it the patient asked the Secretary of the Treasury if he would not send to the patient by five o'clock in the afternoon \$100,000. He wanted to marry and to travel and to fix up his environment and do some worthwhile things, and he wanted \$100,000 to do all these things, so he wrote to the Secretary for it and sent along a bag to put the money in, and asked the Secretary to send it back to him personally in cash and have it on hand at five o'clock in the afternoon. Now this letter shows quite a complete severance from any of the ordinary checks on conduct which the rest of us feel. What kind of conduct is that? He wants \$100,000 this afternoon, wants to do certain specified things with it, etc. That is exactly the way a child acts toward its parents. The child looks upon the father as omnipotent literally. If he gets

into trouble he expects the parent to help him out. Sometimes people never give up that relationship with the parent all through life. Such a person may get married and have five children, and he puts them on the father's doorstep. He cannot support them, never could, is hopelessly incompetent. That is the conduct. The father takes care of them. Then if at any time our earthly father cannot do any of these things for us we have a Heavenly Father to go to.

Case No. 43. When this patient was examined on admission to the hospital in November, 1927, he was coöperative, showed slight facial mannerisms, answered questions relevantly and briefly. Memory and orientation were fair. He was a little evasive but told of numerous delusions and auditory hallucinations. Insight was lacking. He said he was a writer and that he was in the Army and someone reported him to the Captain—reported that he was a person of importance and that he could heal patients. When asked if he could he said he had done it before without knowing it, that it happened from natural powers and came from the supernatural power. He said he had heard voices since he was four years old, that they sometimes called him bad names, that they became real while he was in the Canal Zone and that there some people thought he was Christ. When asked if he was he said, "I don't think I am, but I am sure of one thing—I got the same trouble he had." He said, "I was doing good to people and somebody say, 'We better get him out of the way before they would make a priest of me'."

Now this is not an uncommon thing. You remember that these two forces that we are dealing with that make for construction and destruction are ambivalent opposites, and so we get sometimes a picture where everything is going wrong and again a picture where everything is lovely, a picture of persecutory delusions on one hand and on the other hand of delusions of grandeur. Where the interest, or libido, or whatever you want to call this force within us with which we deal with our problems, has no outward fixation, has nowhere to go, then it returns upon itself. If we do not love anybody else or anything else in the world then our love is self-centered and we love ourselves, and whenever we have a complete 100 per cent return of this capacity for interest, love, or whatever you want to call it, upon ourselves, we get a tremendously inflated ego. Now that is only part of the story. There is a great deal more to it. Here we have all the mental mechanisms and many unusual components too. I call your attention to these two aspects of the situation.

Case No. 44. This patient was living with a man who was her common-law husband. He deserted her and I think took everything she had, and that was the beginning of her trouble. You will remember that I told you that very frequently the beginning of a psychotic difficulty is the moment when a readjustment of the forces of the personality that is of a very radical nature is required of the individual. Now suppose a person is tremendously in love with another person, a daughter with her mother, for example. That is a very characteristic picture, the picture of the single daughter who never marries, cares for the mother, etc., a person on whom she is tremendously dependent in a feeling, emotional way. What happens when the mother dies? The whole world is destroyed. The daughter's capacity from that time depends on her ability to build up a new set of interests that will take the place of this mother who has absorbed her life for so many years. So where one is tremendously involved in an emotional relationship the sudden destruction of that relationship calls for such a radical readjustment that it is frequently at such moments that we find the beginning of a psychosis.

I want to show you one thing in this case. Among our precox patients we have, besides a lot of grotesque, strange, bizarre and incomprehensible ideas that I have been trying to make simple and understandable and comprehensible, conduct that is equally bizarre and incomprehensible. Patients pull out their eyebrows and hair, scratch the skin until they have ulcers, dig out their eyes, cut off their fingers. They show innumerable types of conduct that are just as incomprehensible as their ideas. They show peculiar mannerisms, peculiar, stereotyped movements, have odd ways of speaking and eating. You will find them described in the Outlines and can read them at your leisure. Now these things are susceptible of the same type of reasoning. This patient took a piece of what she called "pig bone" and made some signs on her breasts. You see here on the right breast a sign that looks like the letter "H," and over the left breast she has scratched something that she calls a telegraph pole upside down. (The patient said the "H" looked like "hands across the seas.") Whatever the patient says these signs mean, you may be sure that they have a much more profound significance. Many of the things we say and do do not disclose the real meaning that lies back of them. Mr. Eugene O'Neill has just written a play called "The Strange Interlude," in which the various actors and actresses not only do the usual things that actors and actresses do in a play—they meet on the stage and talk as is done ordinarily in a play but

besides that they tell their real thoughts. They speak their real thoughts aloud. It is as if Miss Jones comes in and Miss Smith says to Miss Jones, "How glad I am to see you!" Then Miss Smith speaks her thoughts and says, "The miserable old cat! I wonder what she wants here?" So back of all these things that are said remain a host of things that are unsaid. The patient says one of the signs represents a telegraph pole upside down and the other means "hands across the sea." Those signs are significant. You may also be sure that those signs point to the utilization of some regressive type of dealing with the world of reality. Just before I came in I asked this patient about those signs, what she put them there for. She said she put them there because she was thinking of the Great Wizard of the Ku Klux Klan and also because it made her suffer. She suffered pain. She wishes to suffer for this wizard. And this wizard in some way is identified with the man who got her into all this trouble. She thinks if she could get out of the hospital and go back home she could fix things up. Here in the meantime is a sign, at least, of suffering, and a sign of continuing emotional relationship with this particular individual to whom she is emotionally subjecting herself. We are already beginning to see the possibility of extracting meaning from the few things she said. Here we have mystical signs that you can think about in connection with the things the patient said.

LECTURE XII

DEMENTIA PRECOX (*Continued*)

Last week we talked about dementia precox and I tried to give you some idea of how the dementia precox individual does his thinking, some idea of the symbolic significance of his thoughts, some idea of the large task of psychiatry in dealing with irrationality, thoughts that are dictated by feeling rather than by what we are pleased to call intelligence. You will remember that I told you that Professor Kraepelin divided the dementia precox group into three parts: the hebephrenic, the catatonic and the paranoid. The patients I showed you last week belonged in the hebephrenic group. As paranoia is a true compensating psychosis so hebephrenia is at the other end of the line—a decompensating psychosis. The hebephrenic is an individual who comes in conflict with some necessity of adjustment to the world of reality and fails. He fails very completely, he decompensates.

Today I want to show you a few catatonics. The catatonic is a little different. The hebephrenic fails and the catatonic has a way of running away. The catatonic is able when he is successful to wall off certain undesirable intrapsychic components in much the same way as, by analogy, we are able to wall off some irritating foreign body. If an irritating foreign body is introduced under the skin or in the muscles there is a certain amount of irritation and ultimately there is formed about it a wall of fibrin. If there is infection—it may be with abscess formation—it is prevented by the fibrin from doing damage, from getting into the circulation or what not, is separated from the rest of the body. Now the catatonic does the same thing with his undesirable intrapsychic elements. He separates them out, as it were, will not have anything to do with them. You will notice that the catatonic develops a lot of negativistic attitudes. He will not have anything to do with people. He sometimes will not talk at all. He frequently goes into stupors, has a lot of muscular rigidities that are calculated to oppose any kind of interference. He isolates himself from everybody and has this fight out, as it were, with himself. Then if he gets well, as he does more frequently than the hebephrenic, he gets well with a certain amount of defect, because after all he has

walled off a certain part of his personality and that part is no longer accessible to the rest of the personality. He has made a certain kind of amputation, as it were, and therefore when he gets well he gets well with a certain amount of defect. By "defect" I do not mean dementia in the ordinary sense. I mean a certain kind of change in the personality which perhaps no one would know anything about if not intimately associated or acquainted with him but which change is decidedly on the wrong side of the equation and is calculated to make him less adaptive than he was before.

I shall show you a few catatonics and let you get a picture of them and then I shall show you a few paranoid precoxes. I have told you about the true paranoiacs and how they retain their intellectual integrity and are really very intelligent people fundamentally. When you see the paranoid precoxes you will see people with very dilapidated delusional systems, very bizarre and grotesque systems, delusions that strike us immediately as belonging in the dementia precox group because of their unpsychological characteristics, which I have already explained to you.

Case No. 45. This is a thirty-year-old white man who has been in the hospital nearly three years.

Patient's father was of a high-strung, nervous temperament and finally developed mental disorder. He was treated at various sanatoria and was finally admitted to this hospital and died here at the age of fifty-six. He had been mentally ill for about seven years before his death. He suffered from an excitement that was never accurately diagnosed but was recorded as an undiagnosed excitement.

Patient was a nervous, delicate child. He was described as temperamental in disposition, artistically inclined and a poor mixer. At one time he was quite musical and played the piano in an orchestra. He completed second year high school, then attended an art school for two years. He opened a studio and touched up photographs, painted lamp shades, etc., making a meagre living. When about twenty-six he fell violently in love with a girl and made plans to marry her, but learned that she was married. He was much upset about this, became restless and refused to eat, saying only cannibals ate and Christians did not. He spoke of one of his boy friends as God. Finally he became so negativistic and unmanageable that it was necessary to place him in a hospital and he was later transferred here.

During his stay here the patient has been in a catatonic state. He will not answer questions although he occasionally whispers a little. He sits about in a rigid attitude and manifests *flexibilitas cerea*.

You will notice that this boy does not have much to do with the outside world. He usually keeps his eyes closed. He no doubt opens them slightly occasionally to see what is going on, but as a gesture it is as if to say, "I don't want to have anything to do with you."

[The patient was asked how he felt but did not reply.]

He obviously hears the question I ask him because there is a very noticeable disturbance. He moves in a way that shows that there is a certain amount of disturbance because of my question, but no answer issues. His tendency is to be mute. Also, his eyes are shut—he is blind. He is not blind as to definitive visual apparatus but he is voluntarily more or less blind, and he is voluntarily mute. I say "voluntarily" but again that is not correct because he does not have, after all, very much to do with this sort of thing. These symptoms have taken possession of him rather than that he has taken possession of the symptoms. You see he is a young man. The precoxes are young—most of them are young. The typical precox comes to us in the early part of the third decade, in adolescence, in the twenties.

It is interesting that this patient's father was also a patient here. That brings up the whole question of heredity, which I have not discussed with you and am not going to discuss because we have not the time. It is an interesting subject but not a great deal is known with any degree of accuracy about the inheritance of mental conditions. Mental conditions are enormously complicated—I hope you have some idea of that—but we have no idea of the relationship between mental characteristics as we see them and what the hereditarians call determiners.

The patient is described as temperamental in disposition, artistically inclined and a poor mixer. That is an excellent characterization of the difficulties that are frequently found in a schizoid type of personality. I have told you of the two great groups of psychoses—manic-depressive and dementia precox. Those two great groups of psychoses occur in people who have on the one hand a manic-depressive or cycloid type of personality make-up and on the other hand a schizoid type of personality make-up. The people of schizoid make-up are inclined to be shut in, introverted, not good mixers, are more apt to be thinkers, artistically or philosophically inclined. All those things hold in the schizoid make-up. Neither the schizoid nor the cycloid personality has anything abnormal about it. They are types of personality. But when such people have the exaggerated

features that result in a psychosis we find that they belong among the people who have the corresponding type of personality.

It is stated that this patient fell violently in love with a girl and made plans to marry her but learned that she was married. That is all the record says about that and I am sorry I cannot enlighten you further. It seems as if he might have plunged rather hurriedly into a situation without taking stock as to where he was going—it looks like one of those emotional affairs that are not well in hand and as if he did not use very good judgment in regard to it. He was very much upset when he learned that this girl was married. He became restless, refused to eat and said only cannibals ate and Christians did not. We now begin to get the precox symptomatology. Just as he refuses to see and to talk he refuses to eat. Refusing to eat is a very complete renunciation mechanism. The first experience we have after we are born that stands out particularly is the act of nursing. The first human being we come into contact with is the mother, and the mother is known to us primarily essentially as a source of food, of nutrition, a source of satisfaction when we have a certain craving which we later learn to call hunger. That craving is satisfied through this particular source. So almost the first thing that happens to the child in connection with an outside personality is the taking in of something from that personality. The taking in of something from an outside personality is the psychological mechanism of introjection, as it is called, which is the opposite of projection. You will remember that I have described projection—how we project things within ourselves on the external world. So also we take things from the external world into ourselves by the process of identification, as I said in the first lecture. We absorb personalities, certain of them, and build these aspects up into our own personality by the process or mechanism of introjection, in this particular case called identification. This process of taking in food, therefore, becomes symbolic of this attitude toward other personalities, and when the patient refuses food he is doing the very kind of thing he is doing when he shuts his eyes and refuses to speak. We might dilate on that to some extent. It is quite characteristic of some of our ordinary speech. We do not usually think of it, equating this taking in of nourishment with our relation to other personalities. You have heard people say, I think, and it is usually the young lady who says it, that somebody is so cute or lovely or lovable that she could eat him. We have in our ordinary conversation any number of symbolic expressions of that sort which

show the equating of the process of introjection at the psychological level with the nutritive process. In other words, the two things are by analogy used as symbols of each other very frequently. So this patient is speaking to us in a symbolic language, that says many other things, that he does not want to have anything to do with the world or anybody in it, and it is noticeable and interesting that the start of his psychosis was associated with a bitter disappointment in some individual person. So in cutting himself off from the world he is simply proceeding a little further than he did with reference to that particular individual person.

Since here the patient has been in a catatonic state, sits about in a rigid attitude and manifests *flexibilitas cerea*.

[Patient's right elbow was flexed, with forearm forming right angle with upper arm.]

You see the patient maintains this position. When these people are put into a certain attitude that is not too uncomfortable you will find that there is a tendency to maintain it. It is not maintained under any particular objection or counter tendency at all. It is almost as if you raised his hand and he is not particularly interested in his hand, does not care much about it, does not care much about the world in general. He probably forgets about the hand and would not do much about it until there is a feeling of fatigue, when the hand will gradually come down. It is quite characteristic of some of the precox patients that they treat their bodies with just the same kind of indifference that they treat the environment. That is not difficult to understand, because after all as far as the psyche of the individual is concerned the body is a part of the environment. I told you of the baby and his experience with the rubber ball and his foot. There is a period in our lives when our body is very literally a part of the environment, before we discover it. Here we see this again.

Case No. 46. This is a twenty-two-year-old colored boy who was admitted to the hospital a year ago.

His slightly older brother is a patient here suffering from hebephrenic dementia precox.

Patient was always quiet and seclusive and was described by his relatives as never being enthusiastic over anything. He never got along well at school and at the age of puberty was taken from school and has worked at minor odd jobs since. About December, 1926, being then about twenty, he began talking to himself, occasionally yelling and gyrating in a peculiar manner. He was sent to a hospital, where he sat about in

a dull, listless manner, mumbling replies to questions in so low a tone that he could not be understood. When asked about voices he said he heard lots of things but he would not tell what they were.

During his stay in this hospital he has been mute practically all of the time and has sat about in a rigid attitude, occasionally showing *flexibilitas cerea*.

[Patient's arms were raised above his head and this position was maintained.]

You see this patient shows *flexibilitas cerea*, as did the preceding case. The old books on neurology described catalepsy, and many of the cataleptics described by those neurologists were cases of catatonic precox.

Case No. 47. This is a twenty-three-year-old white man who was admitted to the hospital a little over two years ago from the Navy. It appears that he was put on the sick list because he had made a statement that he was the "Son of God." He was reported at a Naval Hospital as being surly, stubborn and refusing to talk about his condition. He said someone had put wild blood in his veins and he did not trust anyone.

Family history negative as far as obtainable.

Patient's early childhood uneventful. He left school early and became a farm laborer. Later he held various jobs and finally, at nineteen, enlisted in the Navy. He did not get along well there and a few months later he was put in a sick bay.

On admission to this hospital the patient sat about in a humped-up position with hands between his knees, facial expression rather dull with occasional forced or silly smiling. He was careless in appearance. Answers were given slowly in a low tone but were fairly relevant.

During his stay here patient has varied between a catatonic stupor during which he has had to be tube fed, and a semi-stuporous state when he would move about a little and do some work mechanically, such as pushing a floor polisher. He has been mute practically all the time but occasionally he has given a few replies to questions.

This patient, you see, is more or less stuporous or indifferent, although you cannot tell by his appearance how much he knows of what is going on. We know that when these patients get well they are capable, if they are willing to talk of their experiences and they frequently are not, of giving a very good account of what went on during the illness. In all probability all of these boys know what I am talking about, they are fairly alert about what is going on, within certain limits. However, their interest in the outside world is not

especially keen. They are very much more interested as a rule in their own phantasies, but when they are attracted by anything I say they are perfectly capable of understanding it and telling of it afterward. You see this patient sits in this very characteristic attitude with hands between his knees, facial expression dull. Occasionally there is silly laughter. This silly laughter is a symptom described for a long time as belonging to precox. It does not belong there always. However, what is perhaps a little more characteristic is that the laughter that occurs does not have any special relationship to anything you see that happens in the situation. Sometimes it is very much out of keeping with the situation so that when the patient might be expected to cry he laughs or when he might be expected to laugh he cries. There is a very irregular relationship between the emotional expression and the stimuli, so far as we know, from the outside, what has been called the "April weather" type of reaction. At times during his stay here the patient has been in a catatonic stupor, has been in bed and utterly incapable of caring for himself. In the less profound stupors one can contact with the patients and get them to help themselves with a little assistance. They will eat at the table if told to do so, etc. In this case we have the same attitude that I have spoken of. The patient refuses to look at anybody, to speak or to take any food. As a result he has become exceedingly dependent on this environment that he will not have anything to do with, as dependent as a little child. He leads a vegetative existence, has become very much like a vegetable in the way he functions. He just refuses to have anything to do with anybody, has a certain amount of food forced into him either by persuasion or by a stomach tube, etc. He lives in a world of phantasy as far as his mentation is concerned.

I have previously shown you some fairly typical paranoid reactions. To-day I will show you some other patients who belong in the paranoid group but who are different in ways that I will indicate to you.

Case No. 48. This is a thirty-three-year-old white man who was admitted to the hospital nearly a year ago.

Family history negative except that patient's mother is said to have been mentally ill at time of menopause.

Very little could be learned about patient's early life. He left school at fifteen and worked for a while as a plumber's helper. He enlisted in the Army during the War. He had two subsequent enlistments but apparently got into no special difficulty until the present episode. Other

soldiers observed, however, that he was very seclusive in his habits. He came to the attention of the medical officer in December, 1926, having been in the Army about seven years. He began to talk about hurting other people's feelings by talking too much, said he felt responsible for many conditions of vice and crime, talked about older men practicing perversions with young boys, said he controlled himself by religious influences and music. He was sent to a hospital, where he talked in a somewhat stilted manner, said that science was tried to bring about a second revelation of the Catholic religion. He had auditory hallucinations, mostly a girl's voice but occasionally the voice of his father.

On admission to this hospital the patient was restless, his face was expressionless, his voice was dull and monotonous. After a few preliminary questions he warned the examiner against making any further notes as he said he did not wish to be quoted until he had had time to consult the Old Testament. He then expressed the idea that he was Christ but said he wished some confirmation of this. He pointed to a burn in the left submaxillary region and intimated that it had something to do with his Divine origin. He continued to express these ideas, saying that he was the central pivot of the universe around which all disasters, unusual happenings and illnesses rotated.

[The patient was asked why he wanted to consult the Old Testament at the time of his examination on admission and he replied that he wanted to look up the prophecies, to read up what they said, etc.]

This patient carries on a rather dilapidated conversation. When he was admitted he thought he might be Christ. He wanted some confirmation of that and he asked for the Old Testament so that he could look up the prophecies there. We take this quite seriously, you see. We are dealing with symbolic things here. The psychiatrist has to know something of the history of religion if he is to know what these patients are talking about. The history of the idea of Christ, what it means in the minds of people, how it is connected in the minds of these people with their thinking, is a fascinating story. When this patient came in he pointed to a burn in the submaxillary region and intimated that it had something to do with his Divine origin.

[The patient here interrupted to say, "That is what I wanted to look up, Doc, this burn." Asked why he thought the burn had something to do with his Divine origin, he replied that the only one that can open a person's mind is God Almighty, and that he wanted to see whether it was written in the Old Testament that Christ would get burned on the face and come back again.]

The general impression is that this is a very dilapidated conversation, but let me assure you that this is just as interesting as any of the old hieroglyphics. It requires a lot of study to know what it means. We already get some glimpses. We know that these people with Christ identification have certain fairly definite psychological characteristics. We have a very fair idea of certain outstanding things in their past history. We can make a fairly good guess at some of the things in this boy's childhood, probably. I will just tell you that and will not go on to elaborate it, to show you that there is an ability to read this language that these patients talk and teach us.

Case No. 49. This is a forty-eight-year-old white man who has been here twenty-one years.

No family history available except that an older brother is in a hospital for mental disorder.

Patient stated that he was delicate as a child but became stronger and had no serious physical illness after he grew up. He became interested in religious matters at an early age and was baptized as a Baptist at thirteen. He was always worried about religious matters and said, "I was fearful that I was not right in the sight of God. I have felt that I could not live as I ought to." He was married at twenty-five but did not make a good adjustment with his wife and only a few months after marriage developed the idea that she was unfaithful. Shortly after that he was put in a hospital for mental observation, was transferred to this hospital and has been here since.

At first the patient was mute for a time, would stand about in one position for hours. He would speak of hearing the voices of friends and of enemies, which came from a great distance. They were heard in both ears and they called him vile names. After about a year he became more active and began to give expression to various delusional ideas, most of them having religious coloring. When asked why he was sent here he would say, for example, "Because I was sitting as a lamb from Mount Sinai, with inscription of truth on his forehead." He once made a statement that he was a messenger of Christ and said that this hospital was one of the twelve buildings of the Babylonian tribe. He said he represented the spirit of the Baptist and later said he was John the Baptist. In 1918 he was given a parole of the grounds and began to walk up and down in a regular route. In 1920 he devised a costume made of white cloth which he has worn since that time. He stated that this costume was immaculately white and represented certain commands laid down by the Master. He gradually extended his itinerary until now it covers every part of the hospital grounds. He will not explain very

definitely what his position is. At times he says he is doing penance. At other times he has been heard to say that he is trampling down the enemies of God. Says he is "Elijah the Prophet" and that this place is the "Tabernacle of the Devil" and should be destroyed. He continues to wear white suits trimmed with fringe, which latter he says represents strength. His purpose is to dispel the evil spirits and the Devil. At one time he was asked to do some work about the hospital and replied, "Brother, the work in which I am engaged is far more important than any you could possibly have."

This patient walks about the grounds here dressed in this costume of white, the white being a purification symbol—we use that symbol to express the idea of purity. The patient has stated that this costume is immaculately white and represents certain commands laid down by the Master.

[The patient here interrupted to say, "I have said since I have been here I had not accomplished yet the good I had intended to because I wished to preach the Gospel but I was in the Army and they sent me back here without that opportunity." In reply to the question, "Did you say anything about being John the Baptist? Are you?" the patient said, "It is the same spirit but not the same flesh." The patient stated that the white of his suit represents the Tribe of Judah and that the fringe represents the "tube of the spirit," that a tube is hollow, that the garment is solid and the tube extends on, joining to all the spirits to draw life, etc.]

The patient states that the Bible teaches reincarnation and that he is a reincarnation of the spirit of John the Baptist.

Case No. 50. This is a fifty-seven-year-old white man who has been here only a short time although he has evidently been ill mentally for many years. He was taken into custody by the police because he had written numerous letters to the chief of police of a large city demanding adoption of his "radio balloon" and other new devices for detecting criminals. He signed the name of a superintendent of police to these letters. He also wrote to several senators.

Patient's father died at seventy-eight of apoplexy and was a chronic drinker.

Patient's past history was obtained from patient and is probably inaccurate, being mixed up with his delusional ideas. He said he got along well in school and worked for a while in a law office. He claims that for many years he has been an investigator, being paid by newspapers to investigate politicians. He has been in a state hospital twice, has

been in a local hospital once, and has had one admission to this hospital. Said he made a business of investigating military matters, that he did it for the glory in it. He said that people followed him about and took pictures of his "entire doings" and that the pictures are published in the moving picture theaters of Virginia and New York.

[In reply to a question the patient stated that his business is the "investigation of lunacy fraudery," that he makes his investigations under the Constitution the same as newspaper men, that he investigates the "big fellows," etc.]

You see in these three cases again a paranoid system, but one which is loosely knit together, "dilapidated" is one term, that is not at all impressive. It is rather naïve, rather childish. One does not get the impression that the patient who thinks he is Christ is thinking very much about anything. The story about being John the Baptist is the most coherent, the best preserved, but that patient is talking of something that the more you get into the wilder it sounds. The story of the third patient is of course quite a dilapidated, silly performance, sounds almost like a little boy playing detective, has hardly any adult characteristics at all. The patient looks like a little boy as he tells it, it pleases him to tell these things, he thinks he is quite important. These cases are different from the real paranoiac who has a delusion that may have some foundation in fact but whether it has or not is pretty apt to be quite reasonable on its face, like the delusion of the patient who had a scheme for getting gold out of the water of the ocean. It is well known that there is an enormous amount of gold in the ocean but the difficulty is to get it out economically. It is a perfectly reasonable thing to start with. Perhaps some day someone will invent a scheme to get it.

You will remember that I described to you the physical make-up of the manic-depressive group as given by Professor Kretschmer. Each of these groups, the manic-depressive group and the dementia precox group, has not only a certain personality make-up but a certain physical make-up. The physical make-up of the dementia precox group is just as different from that of the manic-depressive group as the two psychoses are different. You will remember the description of the manic-depressive physical make-up I gave you. The precox physical make-up is pretty nearly diametrically opposite.

The precox is apt to be, relatively speaking, tall, or if not tall he gives more that impression. He is not fat but is slim and flat, fore

and aft, thin through from front to rear, has a flat chest, there is very little distance through. The pyknic type of individual has a magnificent chest with deep and expansible lungs, fine chest expansion. The precox has a flat chest with an acute costal angle so that the chest is very long from above downwards and the lungs are very long from above downwards, so that there is a large amount of lung space compared with the pyknic type. The pyknic type is short, the whole thing is jammed up, the costal angle is wider. The limbs of the precox are longer, are not well rounded or padded with fat as in the pyknic type. The muscles of the precox are inclined to be soft and flabby. We do not find finely developed muscles in these people, that is, in the type I am describing now, which is the *asthenic type*. The hands are inclined to be long, with long slender fingers, thin hands. The face is quite thin. The face of the pyknic, you will remember, was pentagonal. The face of the asthenic is oval. The nose is inclined to be a little long, the chin is inclined to be undershot, so that we get an angle from the nose to the forehead and back to the chin. The asthenic is very poorly developed, muscularly flabby, weak, thin-chested, has a large amount of lung surface. These people with a decompensating psychosis have a decompensating tendency when they have a somatosis also, and the most characteristic disease that they develop when they deteriorate is pulmonary tuberculosis. We have to care for them especially with that idea in view. They have a regressive psychosis, shut themselves off from the world. These patients that you saw here to-day when in a little further regression if let alone will never go out of doors but will stay inside, will not get out of a chair, will not get out of bed. If they are gotten out of bed and dressed they are likely to pick out some dark corner of the ward, back of a door, in the toilet section, under a bed, and curl up and lie there away from everything and everybody. Their general habits lead them into those unhealthy ways of living that invite tuberculosis and their physical make-up is such that they become rather an easy prey to tuberculosis and die rather easily of it.

There is another type of individual that has dementia precox, *the athletic type*. The athletic type is a very distinct type of individual. You know the typical appearance—magnificent chest, broad shoulders, the muscles stand out on the side of the neck, the stomach is flat, there is a thin waist, there are magnificent thighs, arms with splendid biceps, etc. The athletic type is pretty well covered with hair and the hands and feet are pretty large, bony and muscle contour much

in evidence as malar contours of cheek and muscle contours of limbs, etc. That is the definitely athletic type of individual. The head is somewhat different from the head of the asthenic type. There is apt to be a heavy, short neck, the nose is not so apt to be pointed, the chin is prominent. There is sometimes tower skull. That is another type that develops precoc.

There is another group that does not belong to the pyknic, the asthenic or the athletic, that is called the dysplastic group. This group is very varied, with all sorts of variations apparently due rather loosely to various kinds of endocrine imbalances, fat distributions, of thyroid or pituitary variety, or adrenal types, signs of one sort or another of thyroid deficiency, bone defects, etc.

You see here we have a group of people showing rather bad physical make-up—except the athletic individual, who shows a rather better make-up than the asthenic and the dysplastic groups—who develop decompensating psychoses.

Now the hebephrenics and the paranoids do not get well easily. The catatonics get well very much more frequently. However, we must remember that we cannot talk very much or very wisely in prognostic terms unless we realize that after all we are talking about hospital material. There are any number of mild schizoid symptoms that develop in people that never get into an institution because the symptoms pass and never make any serious trouble, and with regard to those people we know very little. We are beginning to know something about them because we are seeing them more and more, but we do not begin to know them as well as we know our hospital material. After all, all these figures of recoverability, etc., are made on the basis of hospital material and in an institution like this as a rule we get only malignant material that comes here usually at the end of a long story and not at the beginning of the story, so that the real prognosis in these various types of schizophrenia is very much better than is indicated by figures that emanate from institutions like this. As you will see, there is a very considerable, probably an important, extraneural pathology in this condition.

I wanted to call you attention in these two lectures to something about these types, something about the way the schizophrenics think, the symbolic meanings, and the way these people are trying to deal with their difficulties and how they are succeeding—how the hebephrenic smashes up pretty completely under the difficulty, the cata-

tonic runs away, sometimes fairly successfully, and the paranoid tarries with the situation but does not like it and builds a new world along the lines of his phantasy in which he lives fairly satisfactorily as far as he is concerned but not very satisfactorily as far as anybody else is concerned. One runs away completely and smashes up, another runs away enough to make an adjustment, the other one builds up an entirely new world of phantasy.

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